

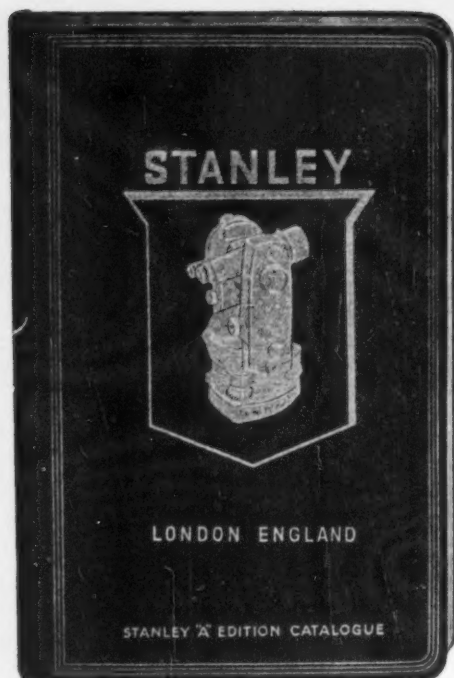
# THE CHARTERED SURVEYOR



THE JOURNAL OF  
THE ROYAL INSTITUTION OF CHARTERED SURVEYORS

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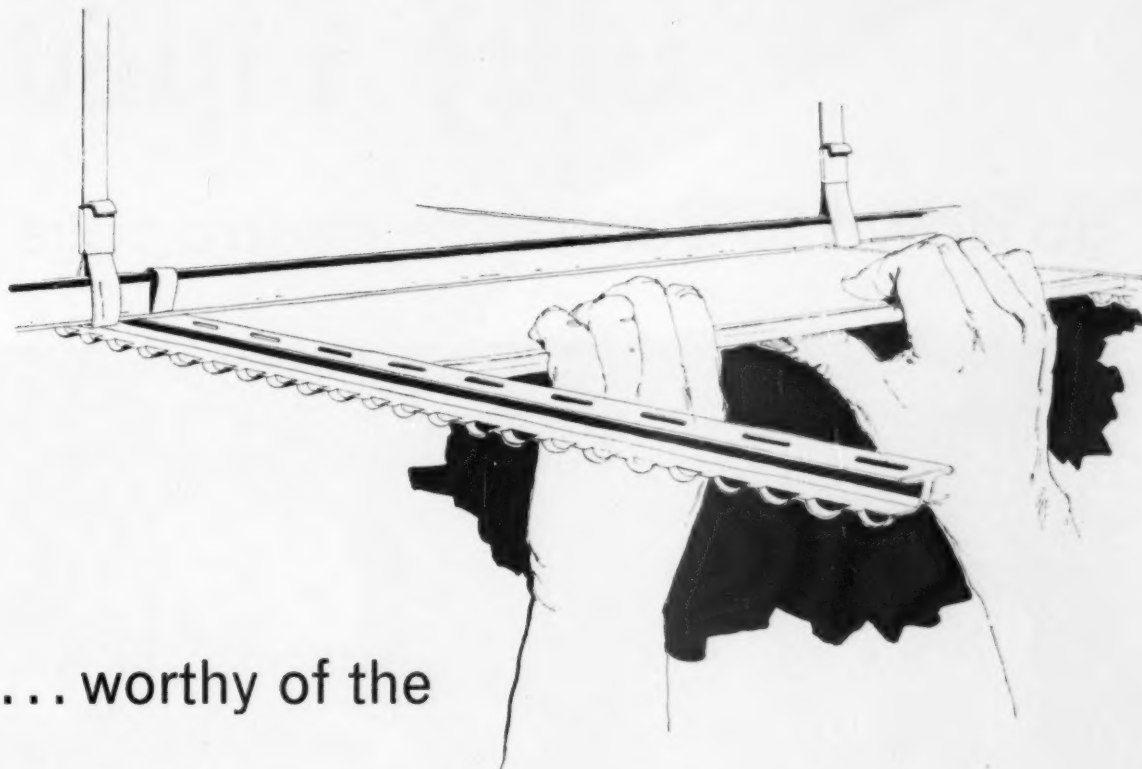
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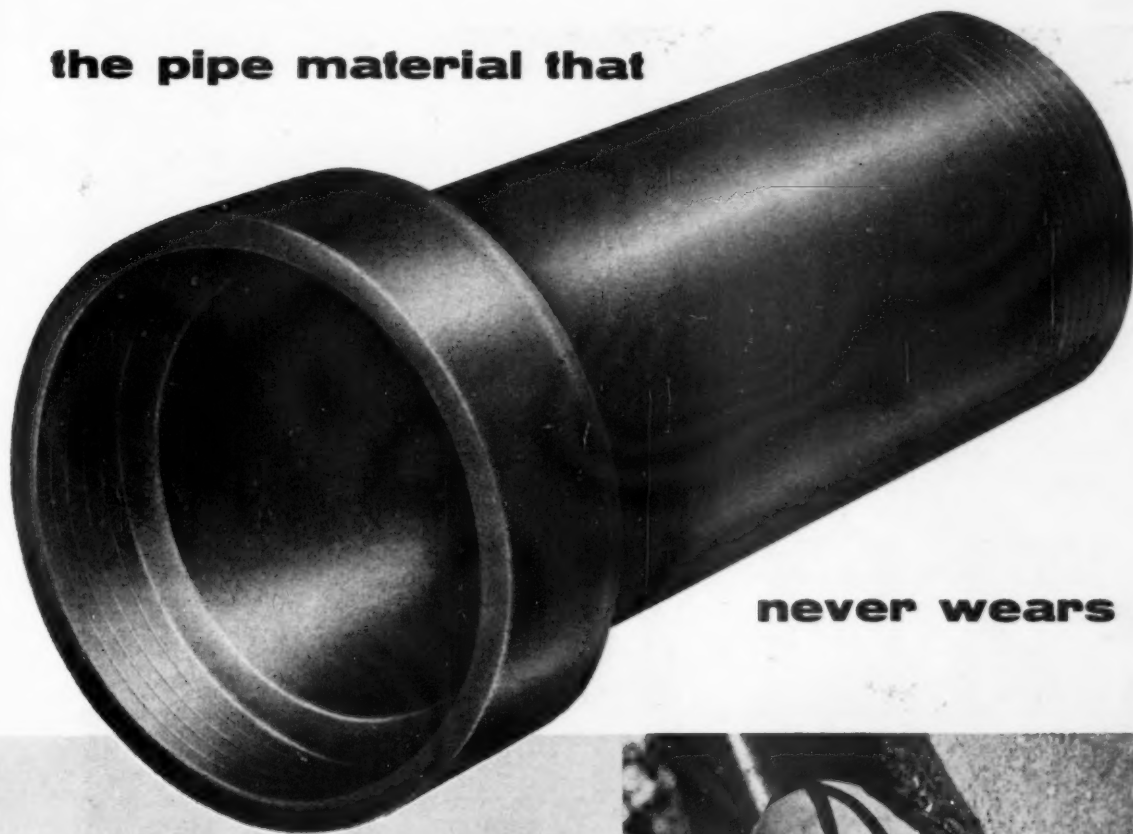
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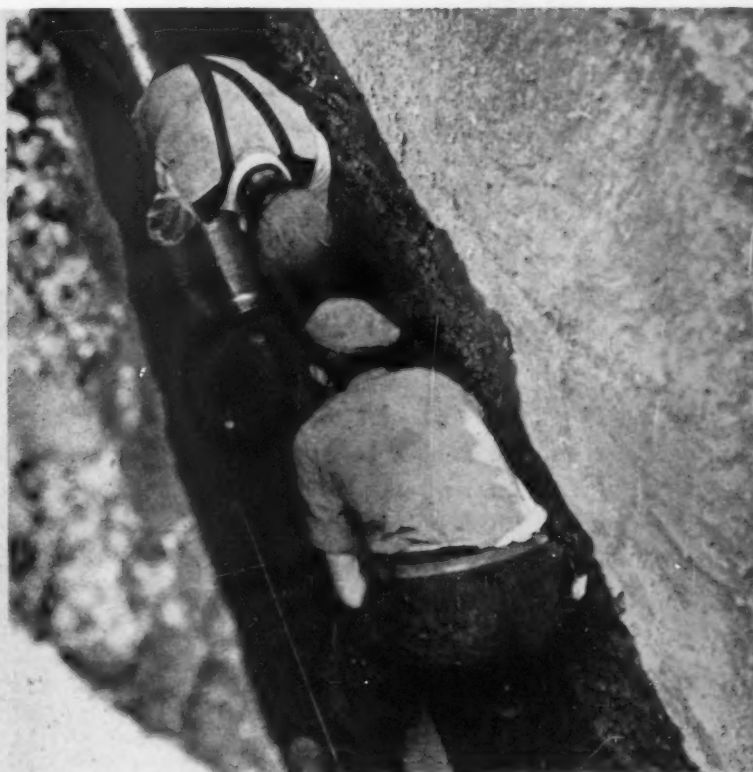


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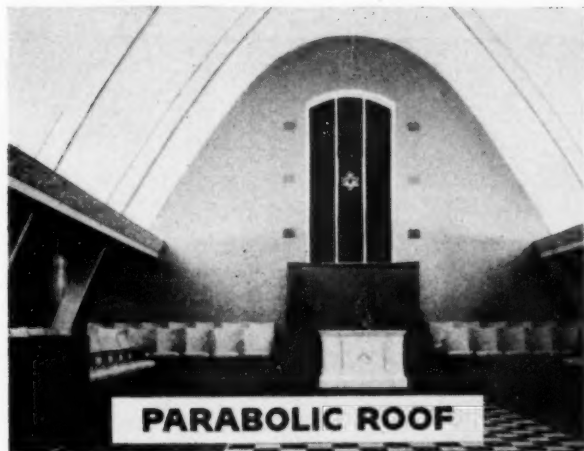
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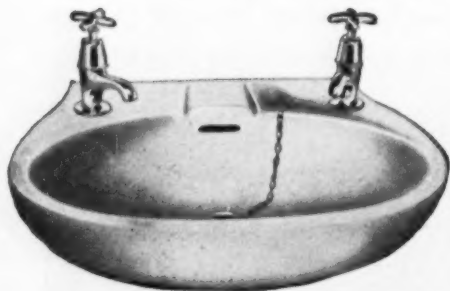
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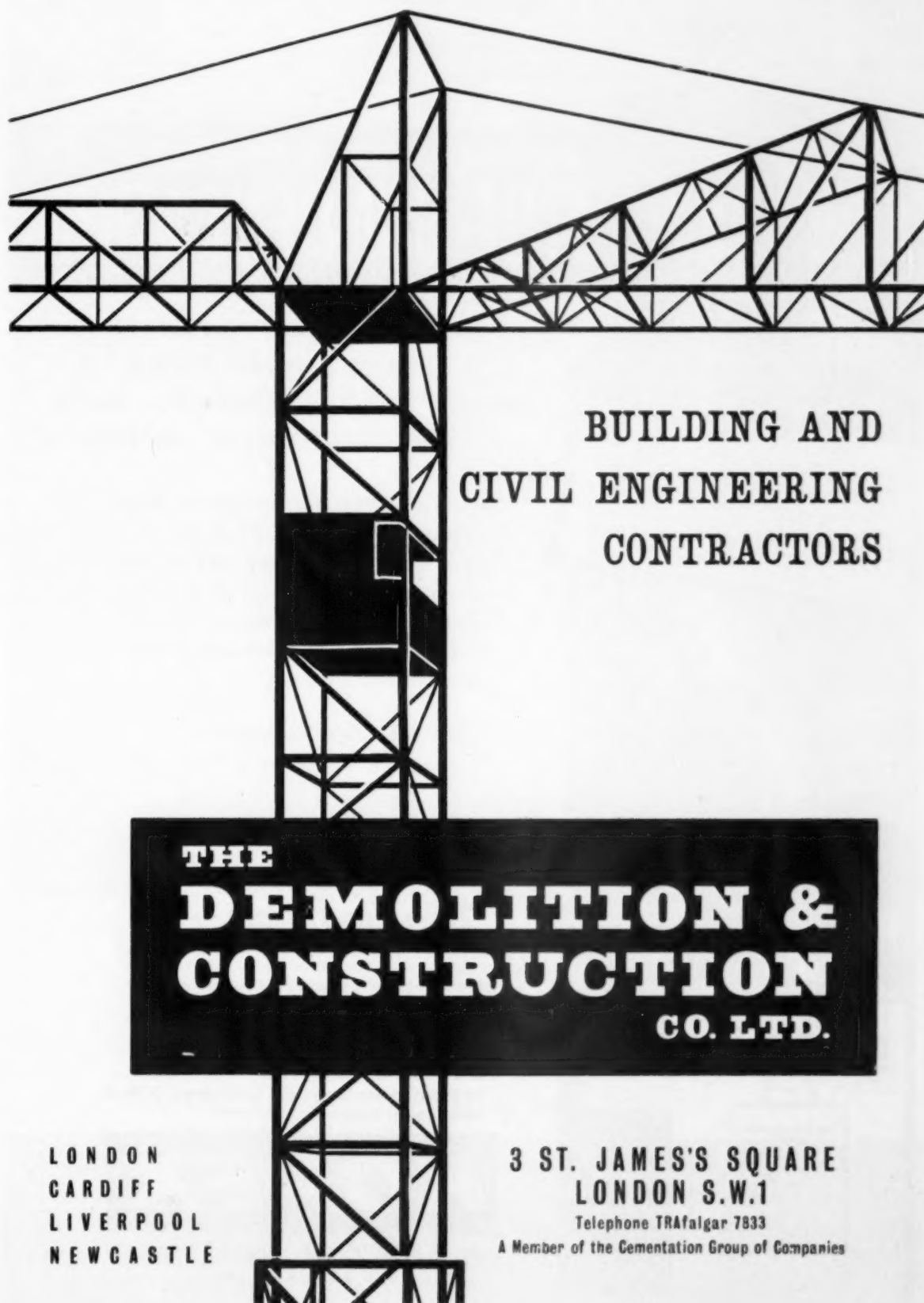
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- 6th March 5.45 p.m. 'Rights of Light'  
by Bryan Anstey, B.Sc. (Fellow), F.A.I.
- 16th March 5.45 p.m. 'Precise Surveying in the Construction of  
Nimrod, the 7 GeV Proton Synchrotron'  
by D. W. Berry, of Messrs. Hilger and Watts,  
Limited.
- 24th March 9.45 a.m. 'Scottish Developments in the Mining Industry'  
by Professor R. McAdam, B.Sc., Ph.D., at the  
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Place, Edinburgh.
- 10th April 5.45 p.m. 'Recent Rating Decisions'  
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*Copies of papers to be presented at ordinary general meetings  
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Chartered Surveyors Annual Conference  
University of Leicester  
4th-8th July, 1961

## Junior Organisation

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# THE CHARTERED SURVEYOR

*The Journal of*

THE ROYAL INSTITUTION OF CHARTERED SURVEYORS

VOL. 93

FEBRUARY, 1961

No. 8

## Editorial Notes

### Sessional Programme

#### *Share Valuations: Why and How?*

Mr. T. A. Hamilton Baynes, M.A., F.C.A., will address the ordinary general meeting to be held at the Institution on Monday, 6th February, 1961, on the subject of "Share Valuations: Why and How?" Mr. Hamilton Baynes' paper will be available from the Institution before the meeting under the new arrangements for ordinary general meetings described in the January issue on page 339. The meeting is to be sponsored by the North-West London Branch.

#### *Rights of Light*

"Rights of Light" is the subject of a paper to be presented at the ordinary general meeting by Mr. Bryan Anstey, B.Sc. (Fellow), F.A.I., to be held on Monday, 6th March, 1961. This is an apparently simple subject but it is one which develops increasingly on study and a complete exposition is impossible; surveyors frequently misunderstand it and many misconceptions about its legal and practical applications need to be dispelled.

Mr. Anstey will speak about contours based upon sky factors calculated from the Waldram diagram which have become useful evidence in legal cases. Although not the same as British Standards Institution, Illumination Engineering Society or Ministerial recommendations, standards based on these contours ensure an acceptable minimum of light during the darkest months of the year. Consideration of other more subjective factors may eventually alter standards but the ultimate question is the evaluation of injury. Mr. Anstey will consider all these subjects in his paper, copies of which will be available from the Institution before the meeting, which will be sponsored by the London (City and Eastern) Branch.

#### *Annual Branch Conference*

The Annual Branch Conference of Chairmen and Honorary Secretaries with the Council of the Institution will be held at Headquarters on Tuesday, 7th March, 1961, beginning at 11 a.m. The Agenda for the Conference is published on page 409 of this issue.

The Agenda is discussed beforehand at Branch meetings so that members may have the opportunity to make their views known to their Branch representatives.

### *Land Surveyors General Meeting*

Mr. D. W. Berry, of Messrs. Hilger and Watts, is the speaker at the land surveyors meeting to be held at the Institution on Thursday, 16th March, 1961. He will be describing Nimrod, an instrument for precise surveying—or in more technical language the 7 GEV Proton Synchrotron, which is being built by the United Kingdom Atomic Energy Authority. The paper will be illustrated by slides. It is hoped that the paper will be published in *The Chartered Surveyor* for March, 1961.

### *New Year Honours*

Congratulations are offered to the following members whose names appeared in the New Year Honours List: Brigadier A. H. Dowson, O.B.E., A.D.C. (Fellow), Director of Military Survey—C.B.E.; Lt.-Col. W. F. Beavan, D.L., J.P. (Fellow), President of the Chartered Auctioneers and Estate Agents Institute (for political and public services in Flintshire); Mr. R. R. Mitchell (Fellow), First Class Valuer, Inland Revenue Valuation Office; Lt.-Col. W. P. Smith, M.B.E. (Fellow), of Fairey Air Surveys; and Mr. R. S. Tizzard (Fellow), Deputy Chief Surveyor of Lands, Admiralty—O.B.E.; and Mr. Edwin Carr (Fellow), formerly Senior Surveyor, Ministry of Works—M.B.E.

Congratulations are also offered to any other members whose names appeared in the New Year Honours List but who are not mentioned above; they are invited to send particulars of their award to the Secretary of the Institution.

### *Balch-Essex Prize, 1960*

At a press reception held at the Institution last month, the first Balch-Essex Prize, a cheque for £25, was awarded to Mr. I. St. Clair Morgan (Professional Associate). Mr. Morgan, who is thirty-two, works for a London firm of chartered surveyors. He is this year's Chairman of the Middlesex and Urban Essex Junior Branch.

Competitors were asked to produce a Report on the Real Property Market for the twelve months ending 30th September, 1960, and a forecast on the probable trend in the succeeding year. The prize will be awarded each year for a paper on this subject. The competition is open to any corporate member of the Institution who is under 40 years of age at the time of submitting his paper.

Mr. Morgan sounds an optimistic note throughout his paper. The year under review was a good year, at least as

far as the property market was concerned. Mr. Macmillan's well-known (and often-quoted) election slogan is used in the first paragraph as an assessment of the state of the real property market during these twelve months. The future too is bright according to Mr. Morgan. He predicts a continued increase in farm rents and suggests a rise of as much as 15-20 per cent. in the value of land for investment in the coming year. Further increases of between 5 and 10 per cent. in the prices of both new and second-hand houses are likely during the coming year. His figures reveal some remarkable prices paid for agricultural land and building land—as much as £270 per acre has been paid for the former and £19,000 for the latter. Mr. Morgan's report is published in full on page 404 of this issue.

### Cost Research

The Report by the Cost Research Panel to the Council on the first four years of their work is reproduced on page 438 of this issue. The Council received the report with approval on 14th November, 1960, and directed that the attention of all members should be drawn to the Report, in the hope that it would stimulate interest in all sections of the surveyor's profession.

Since February, 1958, twenty-six Cost Research Panel papers have been published in *The Chartered Surveyor* and the work of the panel has received considerable publicity in other technical journals and in the national press.

The urgent need for research projects to illuminate the work of the profession has been recognised for some time and the efforts of the Panel are only a beginning. The Panel are well aware that they have only touched the fringe of their research programme, but much valuable work has been achieved and many useful contacts established by their efforts, both within the Institution and in the wide field of the building industry.

### Result of Rent Act Inquiry

In July, 1960, the Social Survey Division of the Central Office of Information completed a report of an inquiry made at the request of the Ministry of Housing and Local Government in order to obtain information about the working of the Rent Act, 1957. The report has now been published (Cmd. 1246, 2s. 6d. net).

For comparison, surveys were carried out before and after the Act; the second survey being completed in May, 1959.

The report shows that for property decontrolled in metropolitan London where the occupier remained unchanged, rents increased by 52 per cent. (from an average of £1 12s. 5d. per week to an average of £2. 9s. 2d. per week). For new occupiers the increase was 102 per cent. The corresponding percentage figures for the rest of England and Wales were 33 per cent. and 74 per cent. respectively.

The average rent for controlled property in London where the owner remained unchanged increased by 60 per cent., and for new occupiers by 120 per cent. The corresponding figures for the rest of England and Wales were 40 per cent. and 58 per cent. respectively.

The overall estimate contained in the report of the number of accommodation units decontrolled in England and Wales by lowering the rateable value limit is 367,000-391,000. This figure does not agree with the estimate of 750,000 made in the 1956 Government White Paper and "it is clear that insufficient data were available to make reliable estimates at the time of the preparation of the White Paper".

An examination of the distribution of the ratio of the

1959 net rent to the gross value for various groups of unfurnished tenancies reveals that below the control limits, 54 per cent. in London and 48 per cent. in the rest of England and Wales had a ratio between the range 1.81 and 2.10. "Allowing for inaccuracies . . . this range probably represents the rent limit of twice the gross value, which is the permitted limit where the landlord is responsible for repairs other than internal decoration."

The report states that one surprising feature for tenancies below the control limit, is the proportion of tenants—5 per cent. in London and 3 per cent. elsewhere—who appear to be paying "an impossibly high rent" with a ratio of 1959 net rents to the gross value greater than 2.5. "Indeed, the highest individual values of the ratio are to be found below the control limit rather than above."

### Four Weeks Notice

Under section 16 of the Rent Act, 1957, no notice by a landlord to a tenant to quit any dwelling is valid unless it is given not less than four weeks before the date upon which it is to take effect. In a recent case in the Queen's Bench Division (*Thompson v. Stimpson* ([1960] 3 W.L.R. 818)) a landlord had given his tenant a notice to quit a cottage; the notice was dated and handed to the tenant on Friday, 15th May, 1959, and gave him four weeks' notice to vacate and give up possession on Friday, 12th June, 1959.

The court held that the landlord's notice was invalid under section 16 of the Rent Act, 1957. In his judgment, the Lord Chief Justice contended that on their true construction the words "not less than four weeks" in section 16 meant four clear weeks. Therefore in computing the period of a notice to quit premises let as a dwelling, the day from which the notice runs as well as the day on which it expires must be excluded.

### Ginger from Bow

"We suggest that each green belt must itself be rigorously reshaped to allow fingers of high-density development to reach out into country parkland and permit wedges of green parkland to penetrate to the centre of the city. . . . We do not want green belts; we want a green Britain." This quotation is from the recently issued pamphlet by the Bow Group on town planning (C.P.C. 2s. 6d. net).

Another proposal contained in the pamphlet is the building of two "New Cities," each planned for a population of about 400,000—one in Lincolnshire to relieve the population problem of Birmingham, Manchester and the North and the other in the West Country to relieve population pressure on London. The reasons behind this proposal are that, though new towns have proved a success, in the opinion of the authors of the pamphlet they are too small and too near the source of their population and industry, and the London area new towns are in danger of being "sucked into orbit as satellites of the enormous London conurbation."

The pamphlet also contains some suggestions (though not startlingly new ones) concerning the redevelopment of central areas and the rejuvenation of residential areas.

A further proposal is to establish area planning councils to be responsible for planning and its implementation in much larger regions than the present counties and county boroughs.

Since its formation ten years ago, the Bow Group have apparently exerted some measure of influence in the shaping of Government policies. It will be interesting to see what effect this latest pamphlet will have.

# Chartered Surveyors Annual Conference, 1961

UNIVERSITY OF LEICESTER : 4TH-8TH JULY

The provisional programme for the fifth Chartered Surveyors Annual Conference is published below. Complete details and a booking form will be issued later.

The principal speakers at the Conference will be Lord James of Rusholme, High Master of Manchester Grammar School; W. O. Hart (who received a knighthood in the New Year Honours List), Clerk to the London County Council; and Philip White of the University of British Columbia.

Members in local government service will wish to know that

application has been made to the Minister of Housing and Local Government for his sanction, under section 228(1) of the Local Government Act, 1933, for the payment of expenses as provided in that section.

Residential accommodation for members and their wives will be provided in the University Halls of Residence. Members who prefer to reserve accommodation in hotels should communicate direct with the hotel of their choice; and particulars of some hotels are given at the end of this notice.

## Provisional Programme

### Tuesday, 4th July, 1961

- 7.30 p.m. Dinner in Hall for members in residence.
- 8.30 p.m. Informal receptions by Vice-Presidents of the Institution for members in residence.

### Wednesday, 5th July, 1961

- 9.30 a.m. Official Opening of the Conference in the Queen's Hall, University of Leicester.
- 10 a.m. Address by Lord James of Rusholme, High Master of Manchester Grammar School, on "The Professions in Contemporary Society".
- 11.15 a.m. Address by W. O. Hart, C.M.G., Clerk to the London County Council on "The profession of a surveyor".
- 12.15 for 12.45 p.m. Lunch in University.
- 2.15 p.m. Meeting of junior members.
- 3.30 p.m. Garden party at Beaumont Hall Botanical Gardens.
- 7 p.m. Dinner in Hall for members in residence.
- 8.30 p.m. Civic reception.

### Thursday, 6th July, 1961

- 9.30 a.m.-12.45 p.m. Discussion groups as follows :—
  - (a) Surveying as a learned profession.
  - (b) Ethics of professional practice.
  - (c) Recruitment for the profession.
  - (d) Public relations for the profession.
  - (e) Office organisation.
  - (f) Technical information.
  - (g) Partnerships.
  - (h) Surveyors of the future.
- 10 a.m. Ladies' tours—Choice of—
  - (a) All-day tour to places of interest in Leicester-shire, Northamptonshire and Rutland.
  - (b) Morning only—visits to the Guildhall and other places of interest in the City of Leicester; followed by a separate tour in the afternoon.
- 1 p.m. Lunch in University.
- 2 p.m. Gold Medal Address by Professor P. H. White, M.Sc. (Fellow), of the University of British Columbia, on "Urban Redevelopment Policies".

- 3.30-5.30 p.m. Sectional meetings—
  - (a) *General Practice*: (provisionally) a discussion on the economic and legal aspects of urban redevelopment.
  - (b) *Quantity Surveying*: programme to be announced later.
  - (c) *Agricultural*: } Joint meeting; address and
  - (d) *Mining* } discussion on ironstone work-
  - Surveying*: } ings and land restoration.
- 7.30 for 8 p.m. Conference Dinner in the University.

### Friday, 7th July, 1961

- 9.30 a.m. Session of Conference, to receive reports of Discussion Groups.
- 11.15 a.m. (a) Brains Trust on Institution Affairs.
- (b) Agricultural members leave for visit to ironstone workings and land restoration.
- 12.30 p.m. Lunch in University.
- 1.30 p.m. Coaches depart for the following visits :—
  - (a) Second party visiting ironstone workings and land restoration. Tea will be provided for both parties.
  - (b) Coventry—
    - (i) *members*: visit to central area redevelopment.
    - (ii) *ladies*: visit to new Coventry Cathedral (followed by tea by kind invitation of the Lord Mayor of Coventry).
  - (c) Tour of Charnwood Forest (with tea). All tours will return to Leicester by 6.30 p.m. During the afternoon there will also be a golf meeting at the Longcliffe Golf Course (preceded by lunch at the Clubhouse).
- 7.30 p.m. Dinner in Hall.
- 9 p.m.-1 a.m. Conference Ball at the Grand Hotel, Leicester.

### Saturday, 8th July, 1961

- 10 a.m. Meeting of Mining Surveyors.
- 12.30 for 1 p.m. Mining Surveyors Annual Luncheon (in University).

## ACCOMMODATION

Residential accommodation for members and their wives will be provided in University Halls of Residence.

Members who wish to reserve hotel accommodation should communicate as soon as possible with the hotel of their choice. The following hotels are reserving a limited number of rooms until the end of March :—

Hotel	Rooms	Cost of Bed and Breakfast (per person)
Grand Hotel ...	12 double-bedded 12 twin-bedded 25 single	From 35s. to 42s.

Belmont Hotel ...	6 twin-bedded ... 3 single	From 28s.
The Royal Hotel ...	3 twin-bedded ...	From 25s.

The following hotels are unable to make a block booking but will reserve accommodation if available at the time of application :—

The Bell Hotel ...	... ..	From 30s.
The Heathfield Hotel ...	... ..	" 22s.
The Midland Hotel ...	... ..	" 25s.

## Report on the Real Property Market

By I. ST. CLAIR MORGAN (Professional Associate), winner of the Balch-Essex Prize

*The following report by Mr. Morgan was adjudged the best entry in the competition for the Balch-Essex Prize, which was held for the first time this year.*

### "Only to add to it one greater still"

The year ending 30th September, 1960, was heralded in with the advent of the General Election and the subsequent return of the Conservative Party to office for a further five years. At the time of the election the economic position of the country was as strong as it had been for many years, and with industry geared for further expansion, a general confidence in business asserted itself after the election. This confidence soon established itself in the property field, and Mr. Macmillan's election slogan "You have never had it so good" could well be applied to the real property market for the period under review.

The Bank Rate stood at 4 per cent. and with a general freedom from credit restrictions, the market was off to a good start, although not so phenomenal as the share market where prices had been in the " doldrums " for some years, whereas property had maintained a more realistic value. As the year progressed, however, the Government saw the red light in the economic field and, to curb inflation, the bank rate was increased to 5 per cent. in January, 1960, with a further increase to 6 per cent. in June. In addition fresh hire purchase restrictions were imposed, and the banks were directed to increase their special deposits with the Bank of England with a consequential pruning of advances, especially with our good friend the property speculator in mind. Although these measures were not popular at the time, it resulted in the economy of the country remaining sound and unlikely to move down from the boom period into any serious recession. The dear money policy has of course had its effect on the property market—not resulting in a decrease in values but a general acceptance of the inevitable higher interest rates for property finance and development.

We have come to accept in the surveying profession the constant stream of legislation directly affecting property, but for the period under review there has been very little to upset the market.

A White Paper which could well benefit the market was brought out this year to introduce legislation to widen the investment powers of trustees. The proposals provide for trustees to invest not more than half their funds in shares of high-class companies, and also to grant mortgages on freehold or leasehold property having 50 years or more to run, the remaining 50 per cent. to be invested in fixed interest securities.

Nothing definite has yet come of this, and with the property market generally free from controls, values over the past year have been governed by the normal laws of supply and demand.

The country generally has enjoyed increased prosperity with full employment in most areas, and this has had a beneficial effect on the real property market. Some sections of the market have achieved an all-time high, particularly residential building land, modern suburban houses, farms, and shops in multiple positions, and even the most optimistic surveyor has been staggered at some of the prices and rents that have been obtained. On reflection some of the increases now appear logical, but there are instances where one wonders if it has not been overdone.

The public in the past year have become more property conscious and one has the impression there is a constant endeavour to "keep up with the Joneses" or alternatively "only to add to it one greater still."

Continuing with this theme, there has been great activity in the past year in the flotation of property companies on the Stock Exchange, and a concerted effort to convince the British housewife that the supermarket store is here to stay.

Dealing first with property companies, we have been presented in their prospectuses with a mixed bag of property and the values placed thereon for the issue have sometimes been suspect. In most cases, however, the public have readily subscribed and more money has thus come into "the kitty" for further developments and purchases by these companies, and to add to their portfolio one greater still, has been very evident particularly in the shop, office and flat sections of the market. This has resulted in very high prices being paid for property, which on the face of it has only a limited potential, and thus is unlikely to stand up to the high value placed on it.

Supermarket stores have sprung up like mushrooms, especially during the last year, and the prices and rents paid have made nonsense of "high street" values. What is more surprising is the location of some of these units, and one wonders whether there might not be a few white elephants when the present boom is over. However, we are reminded that in America, supermarkets account for 9 per cent. of all stores and 70 per cent. of turnover; and about 93 per cent.



I. St. Clair Morgan  
(Professional Associate)



of all food outlets, accounting for around 99 per cent. of the food sales, use self-service. In this country self-service has been adopted by little more than 5 per cent. of all grocery outlets and it represents only 20 per cent. of the grocery trade. There is, therefore, clear scope for improvement and one can only assume that with the potential turnover capacity the supermarket operators consider their premises are cheap even on to-day's rents and prices.

Before commenting on the various sections of the real property market, it is important to consider the national problem of traffic congestion, and the effect it is having on our commercial centres. In the past year there has been much discussion on this subject but nothing really to show for it, and the property market has been little affected by the possible implications of the proposals put forward. The time will come, however, when drastic measures will be required and we may see a start in the ensuing year. New roads to ease congestion in the centres of towns, widening schemes, an all-out drive to discourage the private motorist coming into the centres of cities, provision of more parking space in new developments, and so on. This may result in some centres undergoing a complete change with the possible re-siting of existing shops and office positions and consequential re-appraisal of values. This has already occurred in towns which suffered heavily in the war, and new shop and office centres have been successfully pioneered in such towns as Bristol, Plymouth and Swansea. What are first-class positions to-day, could well be second-rate tomorrow.

Having dealt with the general matters affecting the market, one can now review each section bearing in mind that the past year has seen boom conditions, and that the light now is set at amber with a possible levelling out, and slight recession in the country's economy in the next year or so, followed by another period of increased prosperity and continued inflation.

The headings of the sections are as follows :—

1. farms ; 2. shops and offices ; 3. residential property ; 4. factories.

An attempt has been made in some sections to analyse various sales which have taken place in the past year, and to give an indication of tone of market values throughout the country. The sale figures quoted are common knowledge and the analysis is in simple form, and suggested interest rates, etc., are only a guide and do not necessarily take into account special circumstances affecting a sale. In addition, an endeavour has been made to assess the probable trend of values during the next year, and it is here that the crystal ball becomes a reality and the cautious surveyor reading this paper has a quiet laugh to himself.

## FARMS

The Government informed farmers in October, 1959, of their intention to continue the system of guaranteed prices and long-term assurances provided for under the Agriculture Act, 1957. The annual price review in March of this year, however, was not received without some adverse comment, although statistics show that about two-thirds of farmers' net income last year was received in the form of Government aid.

During the year the effects of the working of the Agriculture Act, 1958, have been more in evidence, particularly the part dealing with the assessment of rents payable for agricultural holdings. The Ministry of Agriculture estimate that rents were increased on about 25 per cent. of the tenanted farms in England and Wales during the past year, and on

current information the average level of farm rents stands about 45s. per acre, an increase of about 8 per cent. on the previous year. As a comparison, the Church Commissioners, who now have a total acreage of 213,520, were in receipt of a gross income of 61s. 9d. per acre, as against 57s. 4d. for the previous year, an increase of about 8 per cent., and their net yield on book value was £4 0s. 2d. per cent. (an increase of 2s. 1d. per cent. on the previous year).

The realistic trend in farm rents augurs well for the future and with rents of about £5 to £6 per acre now being obtained for farms let by tender, the time may not be too far distant when the majority of landlords will be able to contribute on an economic basis towards the maintenance of fixed equipment on their farms.

The demand for agricultural land for investment has remained strong throughout the year. There is, of course, the continued attraction of estate duty relief, but taking into account other tax reliefs, the eventual return on land purchased for investment is higher to-day than the return on most good class industrial equities.

Several large agricultural estates have been sold this year, some have been acquired for investment purposes and others broken up and mainly sold to sitting tenants. The latter have found money more readily available to finance their purchases, and the prices obtained from tenants have on average been about two-thirds of the value of their holdings with possession. Most of the estates purchased for investment have been bought on a 3½ per cent. to 4 per cent. basis and it is interesting to note that the Church Commissioners are no longer prepared to consider the purchase of further agricultural land which does not produce an initial yield of £4 10s. per cent. except for the purpose of infilling existing estates. With regard to the capital value per acre one can best quote again the Church Commissioners who added last year a further 2,554 acres to their portfolio at a cost of £251,255 (£98 per acre) against 1,925 acres purchased the previous year at a cost of £161,618 (£84 per acre). In addition they sold last year 3,889 acres at £373,822 (£96 per acre) and 4,248 acres the previous year at £325,156 (£76 per acre). The Church Commissioners' year ends on 31st March and thus does not cover completely the period under review. Nevertheless, it is sufficient to indicate the upward trend in value which has been maintained in the latter months of this year, and with farm rents undoubtedly showing an increase next year, the general value of land for investment will probably increase by as much as 15 per cent. to 20 per cent.

Now we come to sales of farms with vacant possession, and it is here that some of the prices obtained over the past year have been phenomenal, and rather indicate that the farming community is certainly benefitting from the country's prosperity. About a year ago, £100 per acre was considered more or less a maximum. This year figures of £200 per acre or more have been obtained. This uplift in value has been general throughout the country, and the schedule of farm sales with vacant possession, at the end of this section, may be of interest.

The sales referred to cover the country generally, and it is clear that £100 per acre is a figure of the past. As for the ensuing year, everything points to a further increase by as much as £50 per acre. The Government have assured farmers that their present prosperity will be reasonably secure for several years, with no drastic cuts in guaranteed prices, and in addition they are prepared under the 1957 Act to contribute £50 million towards capital improvement schemes over the next few years, which is an added incentive

FARM SALES 1959/1960

County	Type of Farm	Acreage	Sale Price	Price per acre
			£	£
Gloucestershire ...	Dairy ...	62	12,400	200
	Mixed ...	104	17,000	160
	" ...	128	26,500	200
Shropshire ...	Stock and Arable ...	87	14,000	160
	" ...	220	33,000	150
	Mixed ...	140	32,000	230
Herefordshire ...	Stock, Hop and Fruit	270	47,000	180
Kent ...	Stock, Hop and Fruit	232	43,000	185
Cheshire ...	Dairy ...	39	7,000	175
	" ...	54	11,100	200
	Mixed ...	106	19,750	186
	" ...	128	27,000	210
Northumberland ...	Mixed ...	238	35,500	150
Yorkshire ...	Dairy ...	55	12,100	220
	" ...	60	16,250	270
	Mixed ...	107	13,200	123
	" ...	120	15,000	125
Hampshire ...	Mixed ...	146	22,000	150
	" ...	203	35,000	170
Wiltshire ...	Mixed ...	97	19,000	195
	" ...	115	18,500	172
Lincolnshire ...	Arable ...	201	36,000	180

for landlords and owner-occupiers to plough back money into the land and thus increase its productivity and value.

Next year may well see institutions and the like taking more interest in agricultural land as an investment on account of the shortage of good-class equities and commercial property investments. This may also lead to property companies coming into the market with a portfolio of agricultural estates, and this would be a welcomed breath of fresh air on the property section of the Stock Exchange.

#### SHOPS AND OFFICES

The market for investments during the past year in the shop and office field has again been very active and funds available have far exceeded the supply of investments on offer. Interest rates have hardened, and frequently yields of 2½ per cent. to 3 per cent. have been accepted on present income on the strength of substantial increases in reversion, and when good-class investments have been offered with the benefit of lettings at full market value, purchases have been effected on a 6 per cent. to 6½ per cent. basis. Shops in good-class secondary positions have been sold on a 6½ per cent. basis, whereas 7 per cent. or more is still expected for parades of shops mainly occupied by local traders. Similarly, office blocks in secondary or decentralised positions have been selling on about a 7½ per cent. basis with a slight fluctuation either way depending on the covenant of the tenants in occupation and also the extent of management involved.

During the next year there will probably be an overall hardening in interest rates by about ½ per cent., especially having regard to the rates now being offered by public authorities, and also the signs of improvement in the gilt-edged market.

The development market in shops and offices has been very active, with insurance companies participating with

property companies in schemes throughout the country, and it has been more noticeable this year, that the insurance companies are now initiating their own development schemes, which can only lead to keener competition in this field. The property companies have, of course, been the subject of much press comment this year; some of their portfolios of property are somewhat suspect, and one has the impression that price is no object, as long as they can impress their shareholders at the end of each year with a list of new developments and acquisitions. This policy is bound to be short-lived, and within the next year or so there will be some interesting repercussions.

The blue chips in the property section of the share market, such as City of London Real Property Company, Land Securities, City and Central Investments and City Centre Properties, all have attractive portfolios. These companies have in most cases the backing of insurance companies to further their development schemes; finance has therefore been readily available and in consequence they have not been unduly concerned by the increase in bank rate and indirect restrictions on credit imposed by the Government earlier this year. The effect has been, however, that interest rates on finance have been dearer and the backers have, in addition, been in a position to insist on a larger share of the future equity in the completed developments. Many schemes in the past year have been financed on the sale and lease back basis, with the insurance company producing initial building finance at the rate of about 7 per cent., and then acquiring the freehold or head leasehold interest of the property at the overall cost of the development, and granting an underlease back to the developers for a term of 99 years or more on a 6 per cent. basis, with a share in the future equity income up to as much as 50 per cent. of any increase in rents over the initial lettings.

This activity in the development market has, of course, resulted in high prices or ground rents being obtained for shop and office sites, and this trend is likely to continue into the next year. Prices of £50 a square foot or more or £4,000 to £4,250 per foot frontage have been obtained in the City of London and the West End or the equivalent thereof related to ground rents payable. These figures are of course special to London, although central sites in Birmingham and other large provincial cities are not far behind in value. The town of Luton was in the news recently with the sale of a central site at about £10 per square foot. In the sale of eight public houses in the London area belonging to the Ind Coope Group, and all occupying multiple retail trading positions, four were sold at about £10 per square foot and three others at about £20, £32 and £52 per square foot respectively. Site values are of course very much dependent on the whims of the planning authorities as to plot ratio, etc., and the figures quoted therefore are a simple analysis of actual sales and should be treated with caution, as most of us will realise that each particular site has to be dealt with on its own merits.

The market in shop and office rents in the last year has been very active and some shop lettings have made nonsense of estimates of rents in reversion made a year or so ago. When one considers however, that the public now spend a third more on goods and services than in 1955, the willingness of shop tenants to pay these high rents is to a certain extent understandable. A year or so ago rents of £18 to £20 Zone A, were being obtained for shops in Oxford Street; in this last year this tone has caught on elsewhere in the country, and we now hear of rents of about £12 Zone A being obtained for shops in the centre of Birmingham, with

Manchester, Leeds, Glasgow and Sheffield not far behind. During the ensuing year high rents will still be paid for good positions, although it is probable that the level of rents will be the same as for the last year as there are signs of the spending power of the public being more restricted due to the short time now being worked in several industries, particularly in the Midlands where the motor industry is going through an uncertain period.

The market in office rents during the past year has again been favourable for most developers and landlords. There has of course been frequent comment that the provision of new office space both in London and the provinces is being overdone, and the time is not far off when the supply may well exceed the demand. To a certain extent this may be true, but having regard to the Offices Act, 1960, which sets new standards for office accommodation and comes into effect in 1962, and the general trend of commercial undertakings to better their surroundings and "keep up with the Joneses," the market for new offices in the right position during the next year or so does not give cause for concern. One effect however, which is becoming increasingly evident and is long overdue, is the demolition of old office blocks to make way for new developments, and in London a walk down Victoria Street will confirm this trend.

In the last year or so most office block developments have been let to one tenant, with the sub-letting of surplus accommodation. There are signs however that the market for this type of letting is diminishing, and that new offices are now being let floor by floor. Rents obtained for the small areas are generally higher but with the landlord being more directly involved in the management there is little overall gain, and in addition the property does not generally provide such an attractive investment.

In central London, rents for new office accommodation have on average risen to about 25s. per square foot plus service charges. In some parts of the city (excluding the Bank area) and the West End however, rents of between 30s. to 35s. per square foot have been obtained for large units, and it is interesting to note that the rent being asked for State House, High Holborn, with about 290,000 square feet of space has been reduced by stages to a figure now of 25s. per square foot for an overall letting. This completed property has been vacant for some time, and the ultimate rent achieved may well set the pattern elsewhere for the ensuing year.

During the last year there has been a concerted effort by the Government to persuade commercial concerns to decentralise from the centre of London, and new office blocks have been built in such districts as Croydon, Putney, Kingston, Brentford, Hammersmith, Ealing, Woolwich and Surbiton. Most of these office blocks have been let to one tenant at rents varying between 12s. 6d. and 15s. per square foot, and it is interesting to note that in Croydon, which has had more than its share of this type of development, the highest overall letting last year was 13s. 6d. per square foot whereas up to 20s. per square foot has been obtained for individual floors. It is reasonable to expect that this decentralisation trend will continue into next year, having regard to the high rents now being asked in London and rents will probably average about 15s. per square foot.

In the provinces new office development has been quite active, particularly in Birmingham, where rents of 15s. to 17s. 6d. per square foot have been obtained, although the supply here seems to have caught up with demand, and the level for next year will probably be about 12s. 6d. to 13s. 6d.

per square foot having regard to the large area which will come into the market in the Bull Ring, Smallbrook Street and Corporation Street areas. Average rents in other provincial cities for reasonable accommodation might be put at 10s. to 12s. 6d. per square foot.

### RESIDENTIAL PROPERTY

The values in this section of the market over the past year have been influenced by the shortage of building land, the general improvement in the standard of living, and the effects of the Rent Act, 1957.

Sales of building land for house and flat development have achieved high figures per acre in most parts of the country, and in the south-east and Midlands, the figures, when related to price per plot or flat, for normal suburban development, have averaged between £1,000 and £1,250. As a guide to sales generally, at the end of the section is a schedule of actual sales, and compared with a year or so ago an uplift in value by more than 50 per cent. has resulted.

The high figures obtained have led wherever possible to a high density of development, and the Government are now asking local authorities to co-operate in furthering this increase in view of the shortage of land available. One result of this, especially in the London area, has been the amount of maisonette development, sold on completion at between £3,250/£4,000 for two to three bedroom units. This trend will obviously continue and next year should see more three- to four-storey blocks being erected, as against the present normal two-storey development.

Where ordinary houses have been built in the London suburbs, three-bedroomed houses with garage have been selling at about £4,500, and four-bedroomed houses at figures of about £6,000. In the Birmingham suburbs, especially in the Solihull and Sutton Coldfield areas, an almost similar level of prices has been obtained and elsewhere in the country in high populated areas, there are very few new developments where houses have been sold for less than £3,000.

The second-hand market in pre-war houses about 25/30 years old has of course benefitted considerably from this shortage of land, and in the London suburbs the ordinary three-bedroom freehold house with garage is now fetching between £4,000/£4,500 and in the provincial cities the prices of similar property are between £2,500/£3,000 except in the Birmingham area where £3,250/£3,500 is more general. These figures show in some cases an uplift of about £500 on the previous year, and provided the house is conveniently situated, especially in the London suburbs, there will probably be a further appreciation in value during the next year by as much as 5 per cent. to 10 per cent., and the same ratio of increase will no doubt apply to new houses as there are few signs of any abatement in land prices and building costs.

The above figures have, of course, been related to the mass market and although even here it is difficult to generalise, no attempt will be made in this paper to analyse the sales of the better class five- to six-bedroomed houses other than to mention that figures in the outer London area indicate a price range of between £7,500 to £10,000.

In the flat market, there has been much comment on the rents now being asked in consequence of the ending of three year agreements effected in 1957/1958 as a result of the Rent Act, 1957, but on the whole landlords appear to have been reasonable. For flats in modern blocks both in the London area and the provinces, the minimum rents now required appear to be between £200 to £250 exclusive, whereas for the better blocks in the London area, excluding the West End, rents of £400/£500 exclusive have been obtained.



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for landlords and owner-occupiers to plough back money into the land and thus increase its productivity and value.

Next year may well see institutions and the like taking more interest in agricultural land as an investment on account of the shortage of good-class equities and commercial property investments. This may also lead to property companies coming into the market with a portfolio of agricultural estates, and this would be a welcomed breath of fresh air on the property section of the Stock Exchange.

#### SHOPS AND OFFICES

The market for investments during the past year in the shop and office field has again been very active and funds available have far exceeded the supply of investments on offer. Interest rates have hardened, and frequently yields of 2½ per cent. to 3 per cent. have been accepted on present income on the strength of substantial increases in reversion, and when good-class investments have been offered with the benefit of lettings at full market value, purchases have been effected on a 6 per cent. to 6½ per cent. basis. Shops in good-class secondary positions have been sold on a 6½ per cent. basis, whereas 7 per cent. or more is still expected for parades of shops mainly occupied by local traders. Similarly, office blocks in secondary or decentralised positions have been selling on about a 7½ per cent. basis with a slight fluctuation either way depending on the covenant of the tenants in occupation and also the extent of management involved.

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The market in shop and office rents in the last year has been very active and some shop lettings have made nonsense of estimates of rents in reversion made a year or so ago. When one considers however, that the public now spend a third more on goods and services than in 1955, the willingness of shop tenants to pay these high rents is to a certain extent understandable. A year or so ago rents of £18 to £20 Zone A, were being obtained for shops in Oxford Street; in this last year this tone has caught on elsewhere in the country, and we now hear of rents of about £12 Zone A being obtained for shops in the centre of Birmingham, with



Manchester, Leeds, Glasgow and Sheffield not far behind. During the ensuing year high rents will still be paid for good positions, although it is probable that the level of rents will be the same as for the last year as there are signs of the spending power of the public being more restricted due to the short time now being worked in several industries, particularly in the Midlands where the motor industry is going through an uncertain period.

The market in office rents during the past year has again been favourable for most developers and landlords. There has of course been frequent comment that the provision of new office space both in London and the provinces is being overdone, and the time is not far off when the supply may well exceed the demand. To a certain extent this may be true, but having regard to the Offices Act, 1960, which sets new standards for office accommodation and comes into effect in 1962, and the general trend of commercial undertakings to better their surroundings and "keep up with the Joneses," the market for new offices in the right position during the next year or so does not give cause for concern. One effect however, which is becoming increasingly evident and is long overdue, is the demolition of old office blocks to make way for new developments, and in London a walk down Victoria Street will confirm this trend.

In the last year or so most office block developments have been let to one tenant, with the sub-letting of surplus accommodation. There are signs however that the market for this type of letting is diminishing, and that new offices are now being let floor by floor. Rents obtained for the small areas are generally higher but with the landlord being more directly involved in the management there is little overall gain, and in addition the property does not generally provide such an attractive investment.

In central London, rents for new office accommodation have on average risen to about 25s. per square foot plus service charges. In some parts of the city (excluding the Bank area) and the West End however, rents of between 30s. to 35s. per square foot have been obtained for large units, and it is interesting to note that the rent being asked for State House, High Holborn, with about 290,000 square feet of space has been reduced by stages to a figure now of 25s. per square foot for an overall letting. This completed property has been vacant for some time, and the ultimate rent achieved may well set the pattern elsewhere for the ensuing year.

During the last year there has been a concerted effort by the Government to persuade commercial concerns to decentralise from the centre of London, and new office blocks have been built in such districts as Croydon, Putney, Kingston, Brentford, Hammersmith, Ealing, Woolwich and Surbiton. Most of these office blocks have been let to one tenant at rents varying between 12s. 6d. and 15s. per square foot, and it is interesting to note that in Croydon, which has had more than its share of this type of development, the highest overall letting last year was 13s. 6d. per square foot whereas up to 20s. per square foot has been obtained for individual floors. It is reasonable to expect that this decentralisation trend will continue into next year, having regard to the high rents now being asked in London and rents will probably average about 15s. per square foot.

In the provinces new office development has been quite active, particularly in Birmingham, where rents of 15s. to 17s. 6d. per square foot have been obtained, although the supply here seems to have caught up with demand, and the level for next year will probably be about 12s. 6d. to 13s. 6d.

per square foot having regard to the large area which will come into the market in the Bull Ring, Smallbrook Street and Corporation Street areas. Average rents in other provincial cities for reasonable accommodation might be put at 10s. to 12s. 6d. per square foot.

### RESIDENTIAL PROPERTY

The values in this section of the market over the past year have been influenced by the shortage of building land, the general improvement in the standard of living, and the effects of the Rent Act, 1957.

Sales of building land for house and flat development have achieved high figures per acre in most parts of the country, and in the south-east and Midlands, the figures, when related to price per plot or flat, for normal suburban development, have averaged between £1,000 and £1,250. As a guide to sales generally, at the end of the section is a schedule of actual sales, and compared with a year or so ago an uplift in value by more than 50 per cent. has resulted.

The high figures obtained have led wherever possible to a high density of development, and the Government are now asking local authorities to co-operate in furthering this increase in view of the shortage of land available. One result of this, especially in the London area, has been the amount of maisonette development, sold on completion at between £3,250/£4,000 for two to three bedroom units. This trend will obviously continue and next year should see more three- to four-storey blocks being erected, as against the present normal two-storey development.

Where ordinary houses have been built in the London suburbs, three-bedroomed houses with garage have been selling at about £4,500, and four-bedroomed houses at figures of about £6,000. In the Birmingham suburbs, especially in the Solihull and Sutton Coldfield areas, an almost similar level of prices has been obtained and elsewhere in the country in high populated areas, there are very few new developments where houses have been sold for less than £3,000.

The second-hand market in pre-war houses about 25/30 years old has of course benefitted considerably from this shortage of land, and in the London suburbs the ordinary three-bedroom freehold house with garage is now fetching between £4,000/£4,500 and in the provincial cities the prices of similar property are between £2,500/£3,000 except in the Birmingham area where £3,250/£3,500 is more general. These figures show in some cases an uplift of about £500 on the previous year, and provided the house is conveniently situated, especially in the London suburbs, there will probably be a further appreciation in value during the next year by as much as 5 per cent. to 10 per cent., and the same ratio of increase will no doubt apply to new houses as there are few signs of any abatement in land prices and building costs.

The above figures have, of course, been related to the mass market and although even here it is difficult to generalise, no attempt will be made in this paper to analyse the sales of the better class five- to six-bedroomed houses other than to mention that figures in the outer London area indicate a price range of between £7,500 to £10,000.

In the flat market, there has been much comment on the rents now being asked in consequence of the ending of three year agreements effected in 1957/1958 as a result of the Rent Act, 1957, but on the whole landlords appear to have been reasonable. For flats in modern blocks both in the London area and the provinces, the minimum rents now required appear to be between £200 to £250 exclusive, whereas for the better blocks in the London area, excluding the West End, rents of £400/£500 exclusive have been obtained.

There have been several developments of new blocks of flats in the London suburbs but here the tendency has been to sell the flats on long leases, and in the better class developments, figures of £5,000/£6,000 have been obtained. This trend indicates that flats as an investment are not considered to be generally very profitable and with political implications involved, insurance companies and the like generally avoid this type of investment except for mortgage purposes. Nevertheless, several blocks of flats have been sold this year, with an advertised potential uplift in income on the strength of the termination of the three year Rent Act agreements, and sales analysed for the better blocks indicate the present net income being taken on a 6½ per cent. to 7 per cent. basis, or the value related to the possible sale of the individual flats. These prices have generally been paid by property companies, and the trend for the ensuing year will probably be more cautious, especially with the Government's threat of compulsory acquisition if the new rents asked are not within reason.

SALES OF BUILDING LAND 1959/1960

	*Planning	Sale	Analysis
		£	£
<b>LONDON AREA</b>			
Barnet ... 7 acres ...	52 houses	62,000	1,200 per unit
" ... 9½ " ...	51 "	73,000	1,430 "
Belvedere ... 2½ " ...	—	31,000	12,400 per acre
Crayford ... 5 " ...	—	51,000	10,200 "
Enfield ... 3½ " ...	—	47,000	14,460 "
Finchley ... 142 ft. frontage	12 flats	17,100	1,425 per unit
" ... 97 ft. frontage	6 "	9,500	1,580 "
Potters Bar ... 10 acres ...	—	95,000	9,500 per acre
Rochampton ... site for 100 flats	—	135,000	1,350 per unit
Sutton ... 1 acre ...	4 houses	7,200	1,800 "
Twickenham ... 1 " ...	—	16,250	16,250 per acre
Worcester Park ... 3½ acres ...	—	25,000	7,140 "
<b>OTHER AREAS</b>			
<b>Birmingham :</b>			
Dorridge ... 3½ acres ...	—	20,000	6,150 "
King's Norton ... 1 acre ...	—	7,500	7,500 "
Old Branford Lane 4½ acres ...	—	30,000	6,666 "
Solihull ... 3½ " ...	—	29,000	8,950 "
Braintree ... 5 " ...	50 houses	26,000	520 per unit
Brighton ... 2½ " ...	—	47,500	19,000 per acre
Bournemouth ... 1 acre ...	52 flats	33,000	635 per unit
Chelmsford ... 3/2/3 acres ...	—	27,500	7,500 per acre
Cheltenham ... 6½ acres ...	38 houses	18,250	480 per unit
Dunstable ... 71 " ...	—	251,000	3,530 per acre
Eastbourne ... 2 " ...	—	18,000	9,000 "
Maldstone ... 10 " ...	—	41,000	4,100 "
Poole ... 8½ " ...	40 houses	42,500	1,060 per unit
Southampton ... 8½ " ...	94 "	46,000	490 "
" ... 2 " ...	Flats	26,500	13,250 per acre
Stroud ... 5 " ...	—	26,200	5,240 "
Wilmslow ... 8 " ...	—	27,000	3,379 "
Wimboune ... 20½ " ...	105 houses	60,000	570 per unit
Worthing ... 2½ " ...	102 flats	86,500	850 "
" ... 77 " ...	—	420,000	5,450 per acre
Weston-Super-Mare 12½ " ...	—	44,000	3,500 "

\* Provisional planning where known.

The market in freehold ground rents has not been very active this last year and is likely to remain so. Purchases have been effected on a 12 to 20 Y.P. basis for long-term leases, but individual sales to sitting tenants for leases with 40/50 years unexpired, have resulted in figures of 40/50 Y.P. being obtained.

## FACTORIES

This section of the market has probably been the most uncertain during the past year with the trend of values not following a consistent pattern throughout the country. This is partly due to the control exercised over this section by the

planning authorities, and the Government's policy of redistribution of industry away from the Midlands and south-east to those parts of the country where the unemployment rate is above the national average. The Local Employment Act, 1960, made clear the Government's intention, and under the Act the Board of Trade may provide premises for rent or purchase in the development districts or provide grants of 85 per cent. of the difference between the estimated cost of providing a suitable factory and the value such a factory would have in the open market. In addition the Act makes clear that the issue of Industrial Development Certificates for new factories or extensions in excess of 5,000 square feet will only in exceptional circumstances be granted in areas where there is full employment.

These measures to a certain extent have in some parts temporarily sterilised industrial land values but in any event in such counties as Middlesex, Surrey, and Warwickshire, the land allocated for industrial use on their respective development plans has been very limited, and in most cases factory development is only permitted for occupation by firms in other factories in non-conforming areas. Nevertheless, in the last year where industrial land has been offered for sale in the open market, high prices have been obtained, for example—Birmingham, 1,820 square yards, £20,000; 3,500 square yards, £25,500; West Bromwich, 5½ acres, £33,000; Portsmouth, 1½ acres, £15,500; Gillingham, £12,000 per acre; Hanworth, Middlesex, 1 acre, £17,750.

The market for factories with vacant possession has been active, and figures of £3 10s. 0d. to £4 per square foot have generally been obtained for modern factories in the West London area, an increase of up to 20s. per square foot on the previous year. In other parts of the country similar factories in well established industrial areas have mainly been sold at £2/£2 10s. per square foot. Factory rents in West London have been in the region of 9s. to 10s. per square foot for industrial use, and premises occupied for warehouse and distribution centres in this area have been fetching as much as 8s. to 8s. 6d. per square foot. Elsewhere rents for modern factories or good distribution depots have been in the region of 5s. to 6s. per square foot. The above figures, of course, do not relate to the old industrial units, particularly in the North of England especially in the Lancashire area, where partly as a result of the Cotton Industry Act, 1959, there is a glut of mill premises on the market some of which are on offer at 10s. per square foot, or to rent from as little as 6d. per square foot.

When modern factories have been offered for investment, subject to lettings to tenants of good covenant at present rental values, sales have been effected on an 8 per cent. to 8½ per cent. basis. On other factories, however, a minimum yield of 10 per cent. is still required, and in some cases as much as 12 per cent. has been obtained.

The market during the ensuing year for good class factories, whether for investment or purchase, will probably see prices remaining fairly static although interest rates for good investments might harden a little as there is evidence of some large property investors turning their attention more to this market.

In conclusion, no mention has been made in this paper on the possible effects of the Government's new provision for rating, which abolish the reliefs at present existing on commercial and industrial property. The new assessments do not come into effect until 1963 and, therefore, the implications thereof are best left to next year's contestants in this competition.

## Annual Branch Conference

*The following is the Agenda for the Annual Conference of Branch Chairmen and Honorary Secretaries with the Council, to be held at the Institution on Tuesday, 7th March, 1961.*

### A. REPORT

1. To receive a report upon the action taken on the resolutions passed by the preceding Conference.

### B. RESOLUTIONS

#### PROFESSIONAL MATTERS

2. That the Council be asked to consider the desirability of taking further steps to ensure that, prior to election to corporate membership, candidates are fully aware of the professional responsibilities and conduct expected of a chartered surveyor. (*Middlesex and Urban Essex Branch.*)

3. That the Council be asked to consider the desirability of making advice available to members wishing to commence in private practice on their own account or in partnership with others. (*Middlesex and Urban Essex Branch.*)

EXPLANATION TO RESOLUTIONS 2 AND 3 : The Branch have in mind the possibility that newly-qualified members, venturing out into private practice as principals, do so without full knowledge of the responsibilities they are assuming, with the result that the standing of the Institution could be jeopardised through their consequent inability to take complete care of their clients' interests.

The Branch are also concerned for chartered surveyors who, without experience of the rigours of private practice, might be persuaded to accept employment or to enter into partnership with unqualified persons who, for various reasons, wish to associate their firm with the status given by the Institution and which could lead to trouble for the member concerned who may have given up a secure position for a precarious existence.

#### INSTITUTION ADMINISTRATION

4. That the second paragraph of Branch Regulation 27 which debars Professional Associate members of Branch Committees from voting on applications for transfer to the Fellowship or to sit for the Direct Fellowship Examination be deleted. (*London (City and Eastern) Branch.*)

EXPLANATION : This part of the regulation is a relic from the days when members were elected Professional Associates on passing the Intermediate Examination. Any member who merits election to a Branch Committee is undoubtedly competent and entitled to vote on all matters, and the regulation should be amended accordingly.

5. That the number and qualifications of senior surveyors in all types of offices (whether chartered or non-chartered, private or public) be stated on forms of application both for studentship and for sitting the various examinations of the Institution. (*Gloucester, Somerset and North Wilts Branch.*)

EXPLANATION : At the moment, the application forms merely require the total number of candidates sitting for the examinations in any one office to be stated. The additional declaration form is only required in respect of certain applications coming from non-chartered offices and from the offices of government departments, local

authorities and other public bodies. If the information called for in the resolution were provided on all application forms, it would avoid the somewhat invidious task of having to make local enquiries on these matters. Moreover, in those cases where the additional declaration form is at present required, it usually reaches the Branch Honorary Secretary after enquiries have been made to get the very information set out on the form.

6. That the Council be requested to revert to their previous practice of approaching branches for names of persons considered to be suitable to serve on the standing committees of the Institution. (*Berkshire, Buckinghamshire and Oxfordshire Branch.*)

7. That the Council be asked to examine the present rules for nominating candidates for election to the Council and for voting in that election, in view of the failure of the present system to ensure that Branch and Sectional representatives can only be nominated and elected by those whom they are intended to represent. (*London (City and Eastern) Branch.*)

EXPLANATION : Under the existing system it is possible for any ten members to nominate for election a member not in their Branch or section and the purpose of this resolution is to rectify this illogical state of affairs.

8. That this Conference should consider proposals from the Branches for improving the usefulness of the Annual Branch Conference. (*Internal Services Committee.*)

EXPLANATION : Only a small number of resolutions have been submitted for the Annual Branch Conference for 1961 ; and the scope of debate on some of these may be limited. It would seem, therefore, that a Conference to discuss an Agenda such as that for 1961 may not be utilising to the full the potential advisory services of those attending the Conference. It is hoped that the Branches will indicate how, in their opinion, the Conference might be made more useful.

#### PUBLIC RELATIONS

9. That the Council consider the appointment of a full-time Public Relations Officer who would have, amongst his usual responsibilities, authority under the direction of the President to reply through the appropriate channels to provocative matters of concern to the prestige of the Institution. (*Middlesex and Urban Essex Branch.*)

EXPLANATION : The Branch feel that the profession is not yet sufficiently understood or appreciated by the general public and it is felt that much could be done to correct this by the employment of an officer by the Institution who could present the chartered surveyor and his work to the national and other press.

10. That the Institution provide suitable literature and an attractive portable display stand covering all divisions of the Institution for the use of Branches participating in regional



exhibitions such as careers exhibitions, trade fairs, etc. (*Cambs, Hunts, Norfolk and Suffolk Branch.*)

**EXPLANATION :** The object of this resolution arises from the fact that there was a careers exhibition at a local school recently, and members felt that as there was no permanent display stand, the Institution was at a disadvantage when compared with other professions, etc. The Branch suggest that the stand should be portable, and that a competent designer should be employed. Display boards showing the various divisions of the Institution should also be available. Photographs, maps, surveys, instruments, illustrations, bills of

quantities, etc., could then be exhibited, together with attractive literature, which should be free of cost. The Branch feel that the stand should incorporate an attractive fascia board with the Institution coat of arms.

(NOTE : Resolutions on the same subject (and supported by similar reasons) were suggested by the Middlesex and Urban Essex Branch and the Yorkshire Branch. The matter will be discussed on the above resolution by the Cambridgeshire, Huntingdon, Norfolk and Suffolk Branch.)

#### C. ITEM FOR DISCUSSION

11. Discussion on the public relations of the Institution.

## Winter Agricultural Conference, January, 1961

The first of a new series of Winter Agricultural Conferences was held at the Institution on Monday, 9th January, 1961. Approximately 200 members and guests were present.

The Conference was opened at 11 a.m. by the President of the Institution, Mr. J. D. Trustram Eve (Fellow), F.L.A.S., F.A.I., whose introductory speech included an expression of welcome to the speakers and guests.

The Chair was then taken by Mr. M. F. Strutt, M.C., T.D., D.L. (Fellow), F.A.I., Chairman of the Agriculture and Forestry Committee, who introduced Mr. G. P. Wibberley, B.Sc., M.S., PH.D., of Wye College, the speaker for the morning session. Dr. Wibberley spoke on "Farm Size".

After a buffet luncheon, the Conference was resumed with two papers on "The Future of the Landlord and Tenant System." The first of these was read by Mr. R. B. Verney, who is Deputy President of the Country Landowners Association; the second was by Mr. G. B. Redmayne, Chairman of the Parliamentary Committee of the National Farmers Union. All the papers were followed by general discussions and cordial votes of thanks to the speakers.

The guests at the Conference included Mr. D. A. Collette, O.B.E., Estates Secretary, Church Commissioners; Mr. Eric

Dunnett, of the N.F.U.; Mr. H. A. C. Gill, Deputy Commissioner, Crown Estate Office; Messrs. D. J. Griffiths D. A. Hole and C. F. Huntley, of the Ministry of Agriculture, Fisheries and Food; Dr. R. Jardine Brown, M.A., LL.B., Principal, College of Estate Management; Mr. F. W. Jennings, O.B.E., Director, Agricultural Mortgage Corporation, Ltd.; Mr. P. G. T. Kingsley, C.V.O., Duchy of Cornwall Office; Mr. H. L. Knight, F.L.A.S.; Mr. H. H. Lawrence, F.A.I.; Mr. Travers Legge, of the "Farmers Weekly"; Mr. Arthur Noble, B.Sc. (Fellow), F.L.A.S., of the R.A.C., Cirencester; Mr. H. E. G. Read, F.L.A.S., President of the C.L.A.S.; Mr. Leslie Stagg (Fellow), F.A.I., Senior Vice-President of the C.A.A.V.; Mr. N. E. Strutt, T.E., D.L.; Mr. Francis F. Taylor, O.B.E., F.L.A.S., Secretary of the C.L.A.; Lt.-Col. R. B. Verdin, O.B.E., T.D., D.L., President of the C.L.A.; Mr. Horace O. Wilkin, M.B.E., F.A.I., immediate Past President of the C.A.A.V.; and Mr. Stuart Wyatt (Fellow), F.A.I.

There will be a fuller report of the Conference in a forthcoming issue of *The Chartered Surveyor*. Dr. Wibberley's paper is published on page 416 of this issue. The remaining papers and the discussions will be published in forthcoming issues.

## Council Proceedings

### EXTRACTS FROM THE MINUTES FOR 2ND JANUARY, 1961

At a meeting of the Council held at the Institution on 2nd January, 1961, the following were present: Mr. J. D. Trustram Eve (President), in the chair, Mr. George Alexander, Sir Kenneth Atkinson, Messrs. W. M. Balch, E. J. Battersby, Guy Biscoe, E. B. Bowyer, F. J. Hugh Brackett, W. R. Brackett, A. T. Brett-Jones, W. E. A. Bull, E. C. Cattermole, J. H. C. Chesshire, John Clark, R. H. Clutton, G. L. Coates, A. G. S. Cobb, B. J. Collins, G. A. Coombe, D. J. Cowen, Clifford Dann, A. W. Davson, W. A. Ebbutt, George Edwards, J. Gordon Elsworth, H. Brian Eve, C. T. Every, W. C. Farnsworth, F. G. Fleury, Arthur Gadd, Sir Edward Gillett, Messrs. W. S. Goodbody, J. C. Harris, G. H. Heywood, H. P. Hobbs, William James, H. James King, W. N. D. Lang, William Minifie, J. G. Osborne, C. D. Pilcher, P. M. Poole, H. O. Reed, H. I. Richmond, W. H. Rothwell, P. E. Rowlinson, H. Lacy Scott, C. D. Shott, E. C. Strathon, M. F. Strutt, Cyril Sweett, G. R. Symmons, R. E. Symonds, P. W. Trumper, E. J. Wainwright, G. D.

Walford, Harold Williams, J. D. Wix and E. Harold Palmer (Honorary Secretary).

#### Members Deceased

The President reported the loss sustained by the Institution by the deaths of the following members: Mr. L. A. Culliford, Fellow (1912); Mr. L. H. Fineman, Fellow (1935); Mr. W. J. Gregory, Professional Associate (1911); Mr. F. H. Heppel, Professional Associate (1912); Mr. N. H. Hibbs, Fellow (1912); Mr. Robert Hogarth, Fellow (1937); Mr. R. E. Hookey, Fellow (1906); Mr. J. F. Linney, Fellow (1908); Mr. C. J. Melvin, Fellow (1913); Mr. J. L. Norton, Professional Associate (1935); Mr. P. S. Rowe, Probationer, (1948); Mr. W. A. Sharp, Professional Associate (1913); Mr. J. J. Taylor, Fellow (1903); Mr. C. J. Ward, Fellow (1922).

Members of Council stood in silence as a mark of respect to the memory of the deceased and instructed the Secretary to record in the minutes and to convey to the relatives the sincere sympathy of the Council.



### Transfers to Fellowship

The Council have approved the following transfers to the Fellowship under the ordinary rules, subject to the fulfilment by the transferred member of his obligations under the Bye-Laws: Messrs. H. S. Ballard, F. M. Bomer, B. B. B. Burrows, Arthur Cooper, J. P. Fox, Nigel Garton, F. G. Gleave, G. M. Jones, D. H. Kydd, R. D. Longbotham, Roland Lunn, G. L. Lyster and L. T. D. Melville.

### Honours and Awards

The Council have congratulated those members whose names appeared in the New Year Honours List (these names are published in the *Editorial Notes* on page 401 *ante*).

The Council have also congratulated the Rt. Hon. the Earl of Malmesbury, T.D., D.L., B.A. (Professional Associate) on his appointment as Vice-Lieutenant for the County of Hampshire.

### Members in Australia

The Council have authorised the formation of a Committee in Australia to be elected by a ballot of the members practising there. This decision is the sequel to representative meetings held in Sydney and Melbourne in June, 1960.

The ballot is to be organised in Australia, and the Committee when formed will be able to appoint sub-committees in the different States. It will make recommendations to the Council on future policy as it affects Australian members.

## Professional Examinations: Anonymity of Examiners

The Council, on the advice of the Educational Policy Committee, decided in November, 1959, to rescind their policy of maintaining the strict anonymity of examiners, and agreed to permit the publication of their names. They decided, however, to consider later the extent to which such publication should be made.

Having investigated the matter further, and having consulted all the examiners, the Council have now decided that in implementing their policy of relaxation the following rules shall apply:—

### Parliamentary Committee: Immediate Past-Chairman

The Council have noted with approval that the Parliamentary Committee had expressed sincere thanks to Mr. E. C. Strathon (Senior Vice-President) for his work as Chairman of that Committee from 1956-1960.

### Photogrammetric Society: Institution's Representative

The Secretary of the Institution has been re-nominated to serve as the Institution's representative on the Council of the Photogrammetric Society for the session 1960-1961.

### Annual Branch Conference, 1961: Agenda

The Council have approved the agenda for the Annual Conference of Branch Chairmen and Honorary Secretaries with the Council, to be held at the Institution on Tuesday, 7th March, 1961. The agenda is published on page 409 of this issue.

### Professor Roelof Roelofs: Election to Honorary Membership

At the Ordinary General Meeting on 2nd January, 1961, on a proposal by the President on behalf of the Council, Professor Roelof Roelofs was unanimously elected as an Honorary Member of the Institution in recognition of his outstanding services as President of the International Federation of Surveyors during the period 1955-1959.

(a) members who act as examiners for the Institution may disclose the fact, if they wish to do so, for their private purposes;

(b) members are not permitted to disclose the fact that they are examiners either in personal announcements in *The Chartered Surveyor* or in the technical press;

(c) an annual list of the Institution's examiners will not be published; and

(d) the names of the examiners concerned will not be published on the question papers for the Institution's examinations.

## New Members of the Institution

*The following have been elected Professional Associates of the Institution*

AITCHISON, JOHN ALEXANDER	HEPPLE, RAYMOND EDWARD	MILTON, WILLIAM HAYWOOD	SAUNDERS, DAVID
BARCLAY, IAN JAMES	HIGGINS, THOMAS MARTIN	MONTGOMERY, GEORGE	CHRISTOPHER
CARTER, DAVID GORDON	HOBBS, BRYAN PRENZEL	GOULD SHANNON	SLATER, RALPH
CHALMERS, IAIN GORDON	HOGG, JOHN STORMONT	MORGAN, IFOR EDWARD	STEWART, PETER GRAHAM
CORRIGAN, BRYAN	JONES, ALAN REGINALD	PITHIE	TODD, THOMAS, JOHN
CHRISTOPHER	WALTER	PANSEGROUW, PIETER	TRENCH, WILLIAM
COX, CHRISTOPHER NEIL	JOSELAND, PAUL HIRD	JOHANNES	TWEDDLE, JOHN STORRIE
DATHAN, ROBIN	LOMAS, PETER	PARKER, DESMOND CLIFFORD	WALTERS, LEO FRANCIS
FRANCIS, DENNIS LESLIE	MCMILLAN, RICHARD JOHN	PEACOCK, MICHAEL SWIFT	WASSELL, GRAHAM
GOLDER, PETER JAMES	MANKAD, JAYVANTRAY	PEAKE, DERIC BLOOR	WEBBER, THOMAS PHILIP
GRAY, RANDOLPH ALAN	RANGILDAS	PRITCHARD, CHRISTOPHER	MAYNE
GUNTUN, HUGH	MARTIN, DAVID	PAUL	WILSON, JAMES WILLIAM
HARRIMAN, HOPE AUGUSTINE	MIDDLEMAST, JOHN	REAY, DONALD	HENDERSON

## Hockey

The annual match against the Insurance Hockey Association has been fixed for Wednesday, 22nd February, 1961. Anyone wishing to play should write to Mr. J. A. Porter, 178/181, Parrock Street, Gravesend, Kent.

The ground has not yet been fixed.

The match between the Institution and the chartered accountants which took place on the Surbiton Hockey Ground on Wednesday, 14th December, 1960, resulted in a win for the chartered accountants by 3 goals to 2.

## Chartered Quantity Surveyors Annual Dinner, 1960

The Quantity Surveyors Annual Dinner was held at Grosvenor House on 15th November, 1960, when 1,038 members and guests were present.

The Chairman of the Quantity Surveyors Committee, Mr. Cyril Sweett (Member of Council) presided. The guests included His Excellency The Honourable George Drew, Q.C. (High Commissioner for Canada); The Right Honourable Lord John Hope, M.P. (The Minister of Works); Councillor R. L. Everest (Fellow) (The Right Worshipful the Mayor of Westminster); Mr. W. T. M. Beale (Economic Minister to the Embassy of the United States of America); Mrs. F. E. Cayford (The Right Honourable The Chairman, The London County Council); Sir Charles Wheeler, K.C.V.O., C.B.E. (President, The Royal Academy of Arts); Mr. J. D. Trustram Eve, President of the Institution; the Presidents of the Royal Institute of British Architects, the Institute of Builders, the Institution of Structural Engineers, the London Master Builders Association, the National Federation of Building Trades Employers, the Federation of Associations of Specialists and Sub-Contractors, the County Architects Society and the City and Borough Architects Society; Sir Alexander Killick, C.B.E., D.S.O., M.C. (Honorary Member), President, The College of Estate Management; Mrs. S. M. Borckenhagen, representing The President of The Chapter of South African Quantity Surveyors; the Chairmen of the National Joint Consultative Committee of Architects, Quantity Surveyors and Builders, the National Joint Council for the Building Industry and the Standing Joint Committee for the Standard Method of Measurement of Building Works; the Chairmen of the Elections and Examinations Committee, the Educational Policy Committee, the General Purposes Committee and the Scottish Quantity Surveyors Committee of the Institution; the Permanent Secretary, the Ministry of Health; the Deputy Secretary, the Ministry of Education; the Director-General of Works, the Ministry of Works; the Principals of The Brixton School of Building and the Regent Street Polytechnic; Sir Charles Mole, K.B.E., C.V.O.; Mr. H. G. Tyrrell-Evans (Honorary Member); the Private

Secretary to the Minister of Works; and the Secretaries of the Royal Institute of British Architects and the Institution.

Mr. P. W. Grafton proposed the toast of "Our Guests" in an amusing and witty speech, which was very well received.

In his response the Minister remarked that his prediction last year that the building industry would be even busier had proved to be true and he was very happy to be in a position to make a similar prediction on this occasion. The danger of inflation must however be guarded against at all costs, and the quantity surveyor's unique qualifications in matters of cost control, cost planning and measurement would be vital. He was glad that the Institution had been devoting more attention to the problem of education, and it was important to make our children numerate as well as literate. Planning and measurement depended upon figures and the ability to handle figures reliably was essential in getting things done. Even in forming policy it was necessary to settle priorities, and this meant comparing the likely costs of alternative courses of action. The importance of the quantity surveyor in the building process was bound to grow as the complexity of that process increased. He had to admit that after a year as Minister he was in no position to offer advice on how to run the building industry and instead was only too conscious of the help which the industry gave to his own department and to the Government as a whole. The information provided by quantity surveyors about the load of work was of great value in forecasting the load of activity in the industry.

The second response was by the High Commissioner for Canada, who spoke of his great satisfaction that a professional institute of quantity surveyors was now in being in Canada and his hope that the Institution would extend its contacts with Canada and that an even closer association would develop. Wide fields of opportunity were opening to surveyors in Canada. The concentration of resources was the greatest in the free world but the accumulated skills of the home country would be needed in their development to the full.

## Forthcoming Arrangements

### ANNUAL DINNER, 1961

The Annual Dinner of the Institution will be held at 7.0 for 7.30 p.m. on Tuesday, 7th March, 1961, at Grosvenor House, Park Lane, London, W.1.

An application form was enclosed with the January issue of *The Chartered Surveyor*.

### INSTITUTION MEETINGS

*The following meetings will be held at the Institution in February and March, 1961. Unless otherwise stated the meetings will begin at 5.45 p.m. and light refreshments will be served from 5.0 p.m. It is hoped that copies of the papers to be read at ordinary general meetings will be available before the meeting.*

#### Ordinary General Meeting, 6th February, 1961

At the ordinary general meeting to be held on Monday, 6th February, 1961, Mr. T. A. Hamilton Baynes, M.A., F.C.A., will speak on "Share Valuations: Why and How?"

#### Ordinary General Meeting, 6th March, 1961

Mr. Bryan Anstey, B.Sc. (Fellow), F.A.I., will speak at the ordinary general meeting of the Institution to be held on Monday, 6th March, 1961. His subject is "Rights of Light."

#### Annual Branch Conference

The Annual Conference of Branch Chairmen and Honorary Secretaries with the Council will be held at the Institution on Tuesday, 7th March, 1961, at 11 a.m.

#### Land Surveyors General Meeting, 16th March, 1961

At the Land Surveyors General Meeting to be held on Thursday, 16th March, 1961, Mr. D. W. Berry will speak on "Precise surveying in the construction of Nimrod, the 7 GeV Proton Synchrotron" being built by the United Kingdom Atomic Energy Authority. The paper will be illustrated by slides.

#### Mining Surveyors General Meeting, 24th March, 1961

A mining surveyors general meeting will be held on Friday, 24th March, 1961, at 9.45 a.m., at 7, Manor Place, Edinburgh. Professor R. McAdam of the Heriot-Watt College, Edinburgh, will speak on "Scottish Developments in the Mining Industry."

**Quantity Surveyors General Meeting, 19th April, 1961**

"Cost Prediction as a Guide to Planning and Design" will be the subject of the Quantity Surveyors General Meeting to be held on Wednesday, 19th April, 1961. The speaker will be Mr. P. A. Stone, M.Sc., of the Building Research Station.

The meeting will start at 6 p.m. and light refreshments will be served from 5.30 p.m. Members who wish to attend the meeting and to bring guests are requested to apply to the Secretary as soon as possible for tickets of admittance.

**UNIVERSITY LECTURE IN ESTATE MANAGEMENT**

Mr. G. W. Bridge, F.C.I.L., Deputy Chairman of the Legal and General Assurance Society, Limited, will give the annual University Lecture in Estate Management at the College of Estate Management on Tuesday, 2nd March, 1961, at 5.30 p.m. His subject will be "Investment in Real Property from the standpoint of the Institutional Investor." The Chair will be taken by The Rt. Hon. Lord Reith, P.C., G.C.V.O., G.B.E., C.B. Admission is free and no tickets are required.

## Junior Organisation

**Special Prize of the 1913 Club**

At the ordinary general meeting held on Thursday, 8th December, 1960, the Special Prize of the 1913 Club was awarded to Mr. A. H. P. Gillett, M.A. (Professional Associate), by Mr. W. M. Balch (past-Chairman of the 1913 Club), as illness prevented Mr. J. D. Russell-Davis from being present.

**Annual Dinner, 1960**

The small profit made on the dinner is to be set against the caterer's charge for liqueurs. It will not, therefore, be necessary to ask for any additional payment to cover these.

**Ordinary General Meeting, Thursday, 16th February, 1961**

Mr. Robert King (Fellow), F.A.I., A.M.T.P.I., the Property Manager of B.E.A., will talk on "Continental Practice." Mr. J. D. Russell-Davis (Fellow), F.A.I., Chairman of the 1913 Club, will be in the Chair. The meeting will be held at the Institution at 6.15 p.m. and will be preceded by a buffet tea from 5.30 p.m.

**Ordinary General Meeting, Tuesday, 21st February, 1961**

This meeting is arranged by the J.O.Q.S. Committee and will be held at the Tavistock Banqueting Rooms, 18 Charing Cross Road, W.C.2. Mr. F. B. Lydon, B.E., M.I.C.E., M.I.M.U.E., of the Cement and Concrete Association, will speak on "New Ways with Concrete". The meeting commences at 7.40 p.m. preceded by a meal (6.0 p.m. for 6.30 p.m.). Admission is by ticket only and application should be made to Mr. C. R. M. Norris (Professional

Associate), Messrs. Martin Sheffield and Bristow, 29, Sackville Street, W.1, stating whether dining or non-dining tickets are required and enclosing 7s. 6d. for dining tickets.

**Junior Organisation Residential Course, 1961**

This will be held at St. John's College, Oxford, from 24th-26th March, 1961, and will be on the subject of partnerships. The course will follow the usual form and will commence with dinner on Friday, 24th March, and will break up after lunch on the Sunday. Talks will be given on the following subjects:—practical aspects; financial aspects; costs and rewards of partnerships; retirement arrangements; legal aspects and personal taxation. Further details will be circularised and published shortly and applications to the Honorary Secretary of the Junior Organisation should be made between 11th February and 4th March, 1961.

**Quantity Surveyors Residential Course, 7th-9th April, 1961.****"Clients, Cash and Contracts"**

What is your advice to the client who decides to-day to build tomorrow—is it "can't"?, or "could"?, or "can"?. How do you ensure economic budgets, how do you bill your quantities, and how do you phrase your contracts to avoid the pitfalls of a hurried decision?

The course, which is intended for junior corporate members, deals with the early problems of the clients you have, or the clients you hope to have, and how they may best be helped. It will be held at Trent Park Training College, from Friday evening to Sunday mid-day, 7th-9th April, 1961.

Full details will be published in the March issue of *The Chartered Surveyor*.

## Branch Notices

**BRANCH MEETINGS**

**Bedfordshire and Hertfordshire Junior Branch.**—Red Lion Hotel, Barnet, on Tuesday, 28th February, 1961, at 7 p.m. Mr. W. H. Rees (Fellow), F.A.I., on "Current Legislation affecting Valuation".

**Kent Branch.**—County Hotel, Canterbury, Wednesday, 15th February, 1961. Visit of the President and Secretary of the Institution. Luncheon at 1 p.m. will be followed by a general meeting of the branch at 2.15 p.m. to discuss the Agenda for the Annual Conference of Branch Chairmen and Honorary Secretaries with the Council.

**Sussex Branch.**—Hotel Metropole, Brighton, Tuesday, 21st February, 1961, at 6 p.m. Discussion of the Agenda for the Annual Branch Conference.

**Yorkshire Branch.**—Majestic Hotel, Harrogate, Wednesday, 22nd February, 1961. Discussion at 11 a.m. of the Agenda of the Annual Branch Conference. 2.30 p.m. Annual visit of and address by the President and Secretary of the Institution.

**BRANCH REPORT**

**Northern Rhodesia Branch.**—A cocktail party, the first social function of the session, was held in Ndola on 10th December, 1960. The Branch Chairman, Mr. J. E. M. Parkin (Fellow), received the guests who included the Mayor and Town Clerk of Ndola, representatives of Government and Municipal departments, the Judiciary, Chamber of Commerce and other professional societies. Some keen members of the Institution from Kitwe and an almost 100 per cent. turn out of Ndola members ensured the success of this function.



## Personal Announcements

Mr. STANLEY F. BAGSHAW (Fellow), F.A.I., has retired from the partnership of Messrs. MARTEN and CARNABY AND GEO. W. OSBORN, of Dulwich and Herne Hill, London, as from the 31st December, 1960. He will remain a consultant to the firm which will be continued by his son, Mr. JOHN F. BAGSHAW, A.A.I., A.L.A.B., as sole principal. The style of the firm will remain unchanged.

Mr. E. L. BOUTTELL (Fellow) has entered into partnership with Mr. M. E. C. HUNT (Professional Associate) as from 1st January, 1961. The style of the firm will be Messrs. BOUTTELL AND HUNT, of 163, High Road, Wood Green, London, N.22.

Mr. D. BRACEY COOK (Professional Associate) is discontinuing his partnership with Messrs. WOOD AND WEIR, 5, Wigmore Street, Cavendish Square, London, W.1, by mutual consent and on 1st February, 1961, is entering into partnership with Mr. R. J. BUTLER (Professional Associate). The new firm will practise under the style of Messrs. COOK AND BUTLER, chartered quantity surveyors, at 207, Regent Street, London, W.1. The practice of Messrs. WOOD AND WEIR will be continued by the remaining partners, Mr. ALAN B. WOOD (Fellow) and Mr. A. ROBERT WEIR (Fellow).

The partnership between Mr. F. B. BRYDEN (Fellow) and Mr. I. M. THOMSON (Professional Associate) has been dissolved by mutual consent. Mr. BRYDEN has taken into partnership as from 1st January, 1961, Mr. S. W. HOOPER (Professional Associate) who has been with him for a number of years and will continue to practise under the name of Messrs. F. B. BRYDEN AND PARTNERS, chartered quantity surveyors, at 33, Catherine Place, Westminster, S.W.1, and 50, High Street, Cowbridge, Glamorgan. Mr. THOMSON has entered into partnership with Mr. C. J. BACON (Professional Associate) and is now practising under the name of Messrs. BACON, THOMSON AND PARTNERS, chartered quantity surveyors, at St. Andrew's House, Jameson Avenue, Salisbury, Southern Rhodesia.

Messrs. ASHLEY COOPER, HALL AND COMPANY, chartered quantity surveyors, 19, Albion Street, Hull, have taken into partnership Mr. R. O. ASTBURY (Professional Associate). The style of the firm remains unchanged. A branch office has been opened at 1, Pavilion Terrace, Scarborough (Scarborough 5954), which will be managed as from 1st February, 1961, by Mr. D. PATTERSON (Professional Associate).

Messrs. H. DONALD DIXON AND COMPANY, chartered auctioneers and estate agents, of 60, Newhall Street, Birmingham, 3, and Messrs. PARROTT AND ANTROBUS, surveyors and estate agents, of 45, Newhall Street, Birmingham, 3, amalgamated their practices as from 1st January, 1961. The style of the new firm will be Messrs. H. DONALD DIXON AND COMPANY incorporating Messrs. PARROTT AND ANTROBUS. The partners are Messrs. H. DONALD DIXON (Fellow), PHILIP H. BALDWIN, F.A.I., A. MELVILLE CAVE (Fellow) and ROBERT M. OULSNAM. Mr. ROLAND ANTROBUS, F.A.I., will act as consultant. Mr. ROBERT M. OULSNAM has been taken into partnership also with effect from 1st January, 1961. He has been with Messrs. H. DONALD DIXON AND COMPANY for some years as their Birmingham Manager.

Mr. M. R. DUNNETT (Fellow) has been appointed Deputy

Chief Surveyor to the Prudential Assurance Company, Limited, and Messrs. W. D. CAFFYN and A. C. WHEELER, B.A. (Fellows) as Assistant Chief Surveyors.

Messrs. GERALD EVE AND COMPANY have taken into partnership as from 1st January, 1961, Mr. ALAN J. DUNCAN (Professional Associate), A.A.I., who has been the principal assistant of the firm for some years. As from 1st January, 1961, they have appointed Mr. P. R. EAST, B.S.C. (Professional Associate) who has been with the firm for a number of years as their West Country Resident Agent at their offices at Pearl Assurance House, High Street, Exeter.

Messrs. FOX AND SONS, of 32/34, London Road, Southampton have taken into partnership Mr. W. JOHN COX (Professional Associate) and Mr. S. RUSSELL LASSAM. Mr. A. BERTRAM FOX (Fellow) has retired from the partnership as from 1st January, 1961. The style of the firm remains unchanged.

Messrs. GILBERT, SON AND JAMES, of 8, Waterloo Street, Birmingham, 2, Walsall and Sutton Coldfield, have taken into partnership as from 2nd January, 1961, Mr. DONALD J. HUDSON, M.A. (Professional Associate), F.A.I. The style and addresses of the firm remain unchanged.

The partnership of Messrs. GODWIN, CLIST AND GREENWAY, architects and surveyors, of Bank Buildings, Kidderminster, has been dissolved by mutual agreement as from 22nd September, 1960. All the partners will continue to practise at Bank Buildings. Mr. H. GODWIN, F.R.I.B.A., M.L.S.T.R.U.C.T.E., and Mr. W. A. GREENWAY (Fellow), M.L.S.T.R.U.C.T.E., will practise as Messrs. GODWIN AND GREENWAY. Mr. H. CLIST, F.R.I.B.A., will practise as Messrs. HUBERT CLIST.

Messrs. HAMNETT, RAFFETY AND COMPANY, chartered surveyors and estate agents, of High Wycombe, Beaconsfield, Farnham Common, and Princes Risborough, have taken into partnership Mr. G. LANGTON KENDALL (Fellow), F.A.I., and Mr. A. J. COZENS (Professional Associate), formerly local partners at Beaconsfield and Princes Risborough respectively. The style and address of the firm remain unchanged.

Mr. J. A. S. HEPBURN (Fellow) has terminated his employment with British Railways (Eastern Region) and has assumed duty as London Manager of the Laing Development Company Limited, 15, Watford Way, Hendon, London, N.W.4.

Sir HERBERT HUMPHRIES AND McDONALD, consulting engineers, of Park Chambers, 276, Monument Road, Birmingham, 16, have taken into partnership Mr. DENNIS GEORGE HALL, A.M.I.C.E., hitherto chief engineer to the firm.

Messrs. S. HERN AND CRABTREE, of 93, St. Mary Street, Cardiff, have taken into partnership as from 1st January, 1961, Mr. D. TUDOR THOMAS, B.A. (Cantab.) (Professional Associate), A.A.I. The style and address of the firm remains unchanged.

The partnership between Messrs. J. T. JONES AND R. J. DALLOW (Professional Associates) having been dissolved, Mr. DALLOW has re-commenced practice with his father Mr. LEONARD DALLOW (Fellow). The style of the firm will be Messrs. DALLOW AND SON, chartered quantity surveyors, of "Oak Buildings", Kent Road, Quinton, Birmingham, 32.



Mr. W. N. D. LANG (Fellow), F.A.I., a partner in Messrs. JONES, LANG, WOOTTON AND SONS, of 16/17, King Street, London, E.C.2, has been appointed Surveyor to the Tallow Chandlers' Company.

Messrs. MILLAR, MACRAE AND STEWART, chartered surveyors, 2, Woodside Place, Glasgow, C.3, have opened a branch office at 43, Melville Street, Edinburgh, 3. (Caledonian 6688.)

Messrs. MORRIS MARSHALL AND POOLE, of Welshpool and Newtown, Montgomeryshire, have taken into partnership, as from 1st January, 1961, Messrs. E. M. ROWLANDS, J. W. EVANS and D. J. K. WILLIAMS (Professional Associate). The style and addresses of the firm remain unchanged.

Messrs. A. W. NEATE AND SONS, of 8, St. Mary's Hill, Newbury and Hungerford, have taken into partnership Mr. I. V. SCULL (Professional Associate), A.A.I., following the retirement of Mr. S. T. NEATE, M.B.E.

Messrs. VICTOR OSMOND AND COMPANY, 8, Queen Square, Bristol, 1, have taken into partnership with effect from 1st January, 1961, Mr. JOHN HODGES, F.A.I., who has been with the firm for 10 years, and Mr. MICHAEL DAVIS, M.Sc. (Probationer), A.A.I. The style and address of the firm remain unchanged.

Messrs. W. T. PARKER, of 5, Vicar Lane, Chesterfield, and 6, Market Place, Mansfield, have taken into partnership, Mr. DAVID JOHN PARKER, B.Sc., son of Mr. W. T. PARKER, as from 1st January, 1961. The style and the address of the firm remain unchanged.

Mr. J. C. N. PEARD, M.C., B.A. (Fellow), of Messrs. C. R. MORRIS, SONS AND PEARD, North Curry and Taunton, Somerset, retired from practice on 31st December, 1960, and Mr. BASIL J. MANN (Professional Associate), F.A.I., has been taken into partnership with effect from 1st January, 1961. The style of the firm remains unchanged.

Messrs. JOHN E. PRITCHARD AND CO., of 82, Queens Road, Bristol, 8, have taken into partnership Mr. C. P. PRITCHARD, B.Sc. (Professional Associate), A.A.I., son of the senior partner. The style and address of the firm remain unchanged.

As a result of ill-health, Mr. VICTOR H. RANDALL (Fellow) has resigned his partnership with Messrs. RANDALLS, chartered surveyors, of 67, Cranbrook Road, Ilford, and 20, Woodford Avenue, Gants Hill, Ilford. He will remain with the firm as a consultant. The practice will be continued by the remaining partners, Mr. C. J. BRADLEY, B.Sc., and Mr. R. J. A. WHITBY (Professional Associates). The style and addresses of the firm will remain unchanged.

Mr. R. C. RAWLINSON, O.B.E., T.D. (Fellow) has been appointed General Manager of Town and City Properties Limited, as from 1st January, 1961. Mr. RAWLINSON has resigned from his position as an Assistant Chief Surveyor to the Prudential Assurance Company Limited, in order to take up this appointment.

Messrs. ROGERS, CHAPMAN AND THOMAS, surveyors, auctioneers, estate agents and valuers, have, as from 1st January, 1961, acquired the practice of Messrs. COY AND WAINWRIGHT, chartered surveyors. The business will be carried on at 115/119, Moorgate, E.C.2 (Monarch 5294), under the style of Messrs. ROGERS, CHAPMAN AND THOMAS,

incorporating Messrs. COY AND WAINWRIGHT. Mr. FRANK WAINWRIGHT will retire from active business but will remain available as consultant to the firm, the city office of which will be under the immediate supervision of Mr. HUGH G. CUBITT, A.A.I., and Mr. A. RONALD ATKINSON (Fellow). The existing practice of Messrs. ROGERS, CHAPMAN AND THOMAS at their offices at 36, Southampton Street, Strand, London, W.C.2, and 125, Gloucester Road, South Kensington, London, S.W.7 will remain unchanged.

Mr. PETER DE SANTOS (Professional Associate) has set up in private practice as a chartered quantity surveyor at "Ayala", Hever Road, Edenbridge, Kent.

SYDNEY SHINE (Professional Associate), chartered quantity surveyor, has relinquished his association with Messrs. AINSLEY and commenced in private practice at 2, Southampton Place, London, W.C.1. (Holborn 5052/3.)

Messrs. DANIEL SMITH, OAKLEY AND GARRARD, of 32, St. James's Street, London, S.W.1 and 7, Laurence Poutney Hill, London, E.C.4, have taken into partnership as from 1st January, 1961, Mr. R. A. S. BROCK (Professional Associate), who has been with the firm for the past 12 years.

Mr. B. V. M. SQUIRE (Professional Associate) has relinquished his post as a Valuation Officer for the Southern Rhodesian Government and taken up an appointment as Property Manager to Messrs. SYFRET'S EXECUTOR AND TRUST COMPANY of Rhodesia.

Mr. E. W. STEDMAN (Professional Associate), F.A.I., who has been a partner for over 30 years in the firm of Messrs. SAINT, SYMINGTON AND STEDMAN, 106, High Street, Croydon, and 6, Cheam Road, Sutton, has retired as from 31st December, 1960, because of ill-health.

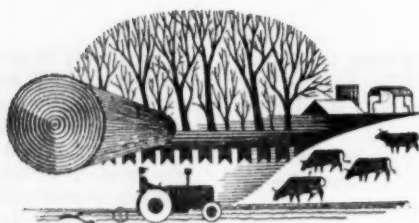
Mr. D. C. STEELE (Professional Associate) and Mr. H. B. PARKER have been taken into partnership by Messrs. R. RAYMOND WOOD, of 19-21, Church Street, Godalming, Surrey. As from 1st January, 1961, the practice will be known as Messrs. RAYMOND WOOD AND PARTNERS, and will be continued from the same address.

Messrs. STIMPSON, LOCK AND VINCE, of 9, Station Road, Watford, have taken into partnership Mr. A. C. BATTCOCK, M.A. (Est. Man.) (Cantab.) (Professional Associate), A.A.I., with effect from 1st January, 1961, in their Berkhamsted practice. The name of the firm remains unchanged.

Messrs. GEORGE TROLLOPE AND SONS, of 13, Hobart Place, London, S.W.1, 5, West Halkin Street, London, S.W.1, and 25, Mount Street, London, W.1, have taken into partnership Mr. P. V. MACKINNON, M.A. (Professional Associate), as from 1st January, 1961. Mr. MACKINNON will be practising from 25, Mount Street, W.1. The style of the firm remains unchanged.

Mr. D. N. S. VELLACOTT, M.A. (Professional Associate), Q.A.L.A.S., has relinquished his appointment with The Orsett Estate Company on being appointed Assistant Bursar to Winchester College.

Mr. A. A. WATSON (Professional Associate) has relinquished his partnership with Sir JOHN BROWN, A. E. HENSON AND PARTNERS, architects and surveyors, of Northampton, and has commenced in private practice under the style of A. A. WATSON (Professional Associate), chartered quantity surveyor, 2A, Hazelwood Road, Northampton. Northampton 1000.)



## AGRICULTURE AND FORESTRY

### Farm Size

By G. P. WIBBERLEY, B.Sc., M.S., Ph.D., READER AND HEAD OF THE DEPARTMENT OF AGRICULTURAL ECONOMICS,  
WYE COLLEGE, UNIVERSITY OF LONDON

*The following paper was presented at the Winter Agricultural Conference held at the Institution on 9th January, 1961. A report of the Conference is published on page 410 of this issue and further conference papers will be published in forthcoming issues of The Chartered Surveyor.*

The title of this paper is made up of two simple four letter words—and is therefore quite contemporary. The simplicity of title is, however, misleading because the subject of farm size is difficult, complicated and full of unknowns.

There are several alternatives in front of me in trying to deal adequately with this subject. One might involve a historical description of the patterns of farm sizes in this country and the changes which have occurred in them. Another is to attempt to catalogue and evaluate the many forces making for farm holdings of different sizes and types. A third is to try to set up optimal sizes of farms for different enterprises and combinations thereof which could be used in present and future farm and estate planning.

Many would, I know, prefer me to use this last approach as they would like measuring rods of this kind in order to help them in estate management decisions. If I say that I cannot do it there may be disappointment and criticism of my own lack of ability and knowledge in this field. If, however, it is suggested that there is no one who can perform this task with any degree of convincing proof then I shall have to provide evidence of incompleteness of knowledge and confusion of trends. In essence, therefore, this paper will show elements of all three of these possible approaches to this question of farm size.

#### CHANGES IN FARM SIZE DURING THE PAST HALF-CENTURY

It is commonly thought that there has been little or no change in the basic distribution of sizes of agricultural holdings in this country. This is not true.

From the information contained in Table 1 it can be seen that between 1913 and 1957 the total number of holdings fell by 74,000 or 16 per cent. The area under agricultural use was not, however, the same at these two dates. Research by R. H. Best at Wye College suggests that the area fell by some 2 million acres, or between 6 and 8 per cent.—a smaller decline than that of the number of holdings.

This decline in the number of holdings has occurred in farms under 500 acres but mainly in those of below 100 acres (a 19 per cent. drop) and especially in the number of holdings

TABLE 1. NUMBERS OF HOLDINGS OF DIFFERENT SIZES IN ENGLAND AND WALES  
To the nearest 1000

		Under 20 acres	20-99½ acres	100-499½ acres	500-999½ acres	1,000 acres and over	All sizes
1913	...	214	137		84		436
1924	...	189	140		80		409
1944	...	156	129	74	3	0.4	363
1949	...	162	128	74	3	0.5	367
1951	...	172	128	74	3	0.5	377
1953	...	175	127	74	3	0.5	380
1957	...	162	123	73	3	0.6	362

below 20 acres where a quarter of those present in 1913 had disappeared by 1957. But this reduction in the very small holdings has not been uniform over the years. The fall up to 1944 reversed itself at this time and until 1953 there was a steady increase in the number of small holdings. There was, according to the official statistics, an increase of 13,648 in the number of holdings under 20 acres by 1953 over 1944. Some of the increase may have occurred through greater accuracy in recording but most of it must have been real—a minor "back to the land" movement of town dweller and returning service man after the second world war. With the resumption of ample choice in food and the disappearance of rationing, together with rising incomes and standards, the smallholding lost some of its attractions as judged by the sharp recommencement of the fall in their numbers after 1953.

Though there have been marked declines in the total numbers of holdings and especially of those of very small size, it is difficult to suggest that a strong reverse movement is occurring, i.e., that larger farms are steadily on the increase. Holdings above 100 acres in size were 83,944 in 1913 and 76,897 in 1957 but this decline occurred in holdings between 100 and 500 acres. In the size above 500 acres, there has been an increase of 388 holdings between 500 and 1000 acres in the 13 years between 1944 and 1957 and farms above 1000 acres increased by 147—a small number but a pro-

portionate increase of nearly 30 per cent.

In essence, therefore, we have seen during the past half century an overall fall in the numbers of farm holdings resulting mainly from reductions in those below 100 acres in size. Accompanying the general fall there has been a significant increase in the number of very large holdings over recent years.

Yet these changes are not large in relation to the general pattern of farming. If we look at the acreage of farm land within different size categories (Table 2) the overall importance and stability of the 100 to 500 acres group are evident. This category is, however, rather wide in its limits and within it there has been a slight increase in the average size of the holding (from 190 acres in 1944 to 192½ in 1957). This is not a significant change.

TABLE 2. AREA OF AGRICULTURAL LAND IN HOLDINGS OF VARIOUS SIZES

	England and Wales (‘000 acres)		
	1913	1944	1957
Under 20 acres ... ..	1,658	1,113	1,078
20-99½ acres ... ..	6,948	6,577	6,359
100-499½ .. ...		14,123	14,055
500-999½ .. ...	18,523	1,890	2,151
1,000 acres and over ... ..		619	848
TOTAL ... ..	27,129	24,321	24,491

Source: Reference 6

It can be argued that comparisons between the numbers of holdings of various sizes are dangerous because many farmers occupy more than one holding and many “so-called” farmers really rely on non-farming income and interests for the main part of their livelihood. The only check on the number of farmers is through the periodic ten-year Census of Occupations (Table 3). In general terms, about 85 per cent. of the holdings over 5 acres are occupied by full and part-time farmers—at least judged by the way people rate their own occupations on the census forms.

TABLE 3. NUMBER OF FARMERS AND FARM HOLDINGS IN ENGLAND AND WALES

	Farmers	Holdings over 5 acres in size
	(‘000)	(‘000)
1921 ... ..	264	339
1931 ... ..	248	321
1951 ... ..	270*	296

\* Includes farm managers—an estimated 49,000.

Source: Reference 5.

From this last table it can be seen that as the number of holdings has dropped so have the number of farmers. (It would have been curious if the movement had been the other way.) From these and other statistics, Hirsch estimates that there were about 260,000 male farmers in England and Wales on holdings of all sizes in the middle 1950s, of which about 31,000 were more than 65 years old. The total may have dropped significantly in the last few years but we will not really know until the results of the 1961 census are available.

#### FINDING THE OPTIMUM SIZE OF FARM

As can well be imagined, the problem of finding the optimum size of farm in this country has attracted a number

of investigators. It cannot be recorded, however, that much real progress has been made. There are a number of really difficult problems in this type of investigation.

The major difficulty is that of getting information as to what happens to the efficiency of a particular farm or type of farm as its size increases but all other aspects of the situation stays the same. Ideally, one would wish to study the performance of farms of a wide range of sizes on exactly similar soils and experiencing the same climate, in a similar locality, producing exactly the same range of agricultural products, all with the same access to capital and credit at identical costs and with plenty of farm workers available to hire with a full range of skills and at the same wage rates. Lastly, and most important in this type of study, is the need to have men of similar experience and managerial skill handling the farms of different size. In essence, therefore, all other factors must be held constant whilst only the element of size of farm is allowed to vary.

It is, therefore, not surprising that attempts to throw light on the optimum size of farm by studying the economic situation of actual farms of different size should have proved relatively unsuccessful. All relationships between size of farm and incomes resulting from such studies have not shown true regressions but only major changes in factors, especially in the level of managerial ability.

Some investigations based on results obtained on farms under the more uniform conditions of East Anglia are, however, pertinent because attempts have been made to choose farms of differing size but in similar localities, with roughly similar ranges of products grown. The results over a number of years have been studied. Broadly the studies<sup>(4,10,11)</sup> suggested:—

1. As expected, the smaller the farm the greater the output per acre necessary to attain any given income. Taking a minimum farm income of £500 per annum, the output necessary to produce this was about £60 per acre on a 20 acre holding, £30 per acre on a 60 acre farm and £25 per acre on a 100 acre one.

2. Insufficient output was the reason for threequarters of the failure of farms to attain an annual income of £500, with excessive expenditure as the reason on less than a quarter.

3. The value of all resources used to secure, say, a £1,000 of gross income was not significantly less on the large farm than on the small one but the use of the farmer's own time was considerably less. This meant that the individual farmer's total rewards for management, risk bearing and his own manual labour was much greater on the large farm than on the small one.

4. In trying to measure the value of agricultural output to the nation a useful measure is that of “social income,” i.e., the sum of the farmer's profit, the rent or rental value of the farm and wages paid or due. The size of this “social income” appears to show little variation according to size of farm. In other words, the higher output per acre of the smaller farm, with its higher paid or family labour bill, is compensated by the greater profits of the larger farm. This suggests that where large and small farms compete on equal terms, the smaller ones are not more productive and do not make a greater contribution per acre to national income than large farms.

5. If efficiency is measured by looking at the size of farm receipts obtained from each £100 worth of farm expenses (allowing for interest on capital and a wage to the farmer) then the East Anglian studies suggest that the large farm did better than the smaller ones in the early 1950s. On a sample



of 300 identical farms for the years 1952-53, 1953-54, and 1954-55, the relevant figures were :—

	Farm Receipts per £100 expenses
	£
Small farms 20 to 100 acres	108
Large farms over 100 acres	117

6. Though there are basic weaknesses in the evidence, there is no suggestion that there are any marked increases in economies of scale on farms of above the level of 300 to 400 acres.

#### FACTORS INFLUENCING THE SIZE OF A FARM BUSINESS

Although various textbooks deal very adequately with the more important factors making for large and small farms, it might be worth while looking at some of them against the background of present agricultural policy and problems. Before we become involved, however, with the seeming wealth of influences leading to large farms, the important practical restrictions existing against increases in farm size must be emphasised.

The most important problem, by far, is the restricted ability of individuals to run large businesses, whether they be farms or anything else. A few people have high ability in management, a few so low that they cannot even manage their personal lives well enough to avoid restriction of their personal liberty by the community at large. In between these extremes lie the bulk of individuals who can run their own lives tolerably well but who quickly run into difficulties in the control of capital and the use of other people's time and skills. Together with this general dearth of ability in combining productive resources satisfactorily and taking uninsurable risks, there are added limitations in any industry like farming where day-to-day personal decisions on biological processes have to be made. Fixed minimum prices for agricultural products have removed some of the risks and decisions from the business of farming but those relating to season, climate and crop and animal behaviour still remain to task the manager's time and skill, or, if delegated, to be paid for at relatively high rates when the size of the business turnover is considered.

Farm growth is restricted by difficulties in making smooth increases in the area under control. The adjoining farm may come available for purchase or rent once in a lifetime. A few additional acres are seldom on offer close to existing land and difficulties in farming are quickly multiplied by taking possession of odd outlying parcels of land. To an individual farmer, the land situation can alternate during his lifetime between having no choice, being offered small parcels of land at inconvenient places or a whole farm at a time when capital or credit is difficult or personal energy is low. New capital has come into farming in the past through three main but restricted channels—patrimony, parsimony and matrimony and it is only recently that trade and bank credit has been on offer on generous terms. The creation of new capital through the creation of joint stock companies has not developed to any extent in agriculture and farming "empires" have usually been personal efforts which start to crumble with old age and disintegrate with the death of the builder.

Fortunately, there have been certain alternatives in farming which have relieved some of the urge to increase the physical acreage of many farms. Some types of farming, like the

intensive systems of producing fruit, vegetables, flowers, milk, pigs and poultry, can be successfully developed on relatively small areas of land. In these cases supplies of capital and skilled management are much more important than land as production can be intensified through the establishment of specialised protective structures and the importation on to the holdings of animal feeding-stuffs grown on other farms within the country or from countries abroad.

Finally, as long as non-commercial considerations remain important in the possession of rural land, subjective satisfactions such as prestige, the importance of place, emphasis on rural sports, the need to "get away from it all," the joy of dealing with growing things, the farm as a good place to bring up children, a desirable place for retirement—all these will mean a strong and continuing demand for the smaller holding. Rising standards of living and improved private mobility are making it more and more easy for people to combine full-time urban employment with full-time country and farm living. No longer is the choice of a small farm the unsatisfactory one of the past—that is, of full-time farming on a small acreage plus the hope of a spare-time job. It is more customary to-day for the outside job to be full-time and the farm handled on a spare-time and week-end basis.

Recently, some measurement has been possible of the size and nature of holdings *not* of a full-time nature. Using a measure of the amount of work to be done on the holding concerned (by standard labour requirements), the Ministry of Agriculture has analysed all holdings in England and Wales for the years 1955 and 1957<sup>(2)</sup>. If a total of 276 standard man-days is taken as the size above which at least one full-time man is needed to care for the cropping and stocking present on the holding, then some 43 per cent. of the existing farm holdings fall below this size. This is a measure of the numbers of the part-time, spare-time and small hobby holdings though, of course, the acreage involved is only a small proportion of the total agricultural area. Many of the occupiers of these small farms do, however, rely entirely on their farming activities for their livelihood. At the other end of the scale, holdings with standard labour requirements of 451 or more man-days comprise 44 per cent. of the total number of holdings and cover 88 per cent. of the total area under crops and grass.

#### PRESENT-DAY TRENDS

We should now glance at present trends and policies in order to see if they are strengthening or weakening the restrictions on the size of the business within British agriculture. On balance, I think we can say that present conditions are markedly strengthening the slow trend towards an increase in farm sizes despite the influence of the recent small farmer scheme.

When any firm tries to expand production, the famous law of diminishing marginal returns will operate sooner or later. Its onset is best reduced or postponed by greater flexibility in the supply of all the resources needed. This flexibility is improving in British agriculture. A freer market in land and changes in rents is making land use more sensitive to changes in land cost. Modification of farm size and shape within estates is becoming easier with the relaxation of the more rigid aspects of landlord-tenant law and custom. Even greater flexibility will arise if farm fixed equipment, especially in buildings, is made more temporary and more adaptable in nature. In the field of capital and credit, traditional sources of supply like the joint stock banks have become more relaxed in their granting of unsecured



loans and they, together with the new National Farmers Union sponsored Agricultural Credits Corporation, have become more flexible in lending against properly constructed farm budgets.

Flexibility on the labour side still waits for the more widespread use of improved training schemes for new entrants and existing workers in agriculture. The development of farm institute training and good apprenticeship schemes still come up against the lack of real interest by farmers in technical training for their sons or their workers.

Restrictions in management ability are the main obstacle to a marked increase in the size of the farm business. As has been customary since the industrial revolution, British farming is constantly receiving injections of capital and managerial ability from other walks of life. But the bulk of present-day farmers are still simply the sons of previous farmers (at least four out of five) and these are usually without any technical or professional training.

There are, however, some encouraging signs of change. Through the Young Farmers' Clubs, many of the farmers of the immediate future are fully conversant with modern techniques of production. In these clubs and in the farm institutes and agricultural colleges recent developments in the modern science of management are being included in the curricula. In the agricultural faculties of the universities and in the professions allied to agriculture considerable interest is being shown in this management side with its useful techniques of business analysis and budgeting drawn from a combination of economics and farm husbandry.

Here is one way in which a professional organisation like the Institution can help—by positively encouraging the various attempts being made to strengthen training and experience in management for those actively engaged in the agricultural industry. The need was emphasised so clearly by the past Chairman of the Agriculture and Forestry section of the Institution, Mr. R. Charles Walmsley, in his paper presented to the Annual Conference of the Institution in September, 1960 (*The Chartered Surveyor*, October and November, 1960). A greater emphasis on training and experience in farm business administration would undoubtedly stimulate an improved pattern of farm sizes in this country.

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## Agricultural Law Notes

### Notes on Recent Cases and Points under the Agricultural Holdings Acts

By W. S. SCAMMELL, C.B.E., M.C., LL.B. (Associate)

#### NOTICES TO QUIT

(1) Because of the degree of security of tenure which the Acts confer upon tenants of agricultural holdings, notices to quit remain one of the most important topics in practice. As was apparent in the Institution memorandum published in the June, 1960, issue of *The Chartered Surveyor*, at page 645, there has been much thought and some discussion on the merits and working of section 24 (2) (d) of the 1948 Act. This article is not concerned so much with the pros and cons as to any possible amendment, on which there are varying and to some degree contradictory views. It is apparently thought by some that the section may be unfairly used by certain landlords against tenants who are in default under a notice to remedy breaches of the tenant's obligations in respect of the holding. It is thought by others that, where a tenant has been properly called upon to remedy such breaches and has been given a reasonable time in which to do it and in the arbitrator's mind and judgment has failed in something more than a trivial degree, there is no real ground at all for suggesting that the tenant should escape the consequences of his own acts or omissions, nor even be able to invoke some long drawn out procedure and preliminary arbitration to find out whether the notice to remedy is one with which he ought to comply.

(2) For the purposes of this note the important point is the recent decision of Mr. Justice Diplock in *Price v. Romilly* ([1960] 3 All E.R. 429). It is clear from the judgment in this case that "substantial compliance" with a notice to remedy is not good enough. The tenant's contention that it was sufficient if there was a substantial compliance with the terms of the notice to remedy, failed. There are no such words in the Act as "substantial compliance". The Judge said "No doubt, of course, the *de minimis* rule would apply, but the Act seems to me to be plain in its terms, and if a tenant fails to comply fully with the requirements set out in the notice, being requirements for remedying breaches of terms or conditions of his tenancy which are not inconsistent with the fulfilment of his responsibilities to farm in accordance with the rules of good husbandry, the provisions of section 24 (2) (d) of the Act are fulfilled. The really substantial argument which has been put forward is that 'substantial compliance' with the notice suffices; that argument fails".

This decision is a clear support for the judgment by Judge Paton in the Minehead County Court previously in the case of *Edmunds v. Woollacott*, ("The Estates Gazette", 28th February, 1959, Vol. 173, page 373, and "The Chartered Land Agents Society Journal", Vol. 58 (March, 1959)).

(3) Another point of help to practitioners which the same judgment in *Price v. Romilly* establishes is again in accord with the judgment in *Edmunds v. Woollacott* in which it also arose, namely, that when a tenant is given a reasonable period in which to do the work required, and he does not do that work in that period, but does it in between the end of that period and the service of the notice to quit, it avails him nothing for the purposes of this same section. In other words, the time at which the arbitrator has to assess the tenant's default is not at the date of the notice to quit, but at the date when the reasonable period of time he was given, expires.

(4) The case of *French v. Elliott* ([1959] 3 All E.R. 866) and ([1960] 1 W.L.R. 40) has already been so widely publicised and discussed that little more need perhaps be said about it in these notes. It may, however, be helpful to add a few remarks on it :—

(i) A second notice to quit may well be served if another ground to support it has come into existence, since the landlord served a prior notice to quit based on some other ground.

(ii) There may be several reasons or grounds stated in a notice to quit, and, if so, the fact that one of them is not established does not mean that the notice may not take effect if some other grounds are established.

(iii) Where the notice to quit served is one which contains one of the special grounds or reasons, sometimes loosely called "the deadly sins", as set out in paragraphs (b) (requirement for a non-agricultural purpose), (d) (default in compliance with a notice to remedy breaches) and (e) (an irremediable breach materially prejudicing the landlord's interest) of section 24 (2) of the 1948 Act, it is useless for the tenant to serve the ordinary type of counter-notice under section 24 (1). The only thing he can effectively do if he wishes to contest the reason so stated, is to serve the notice requiring arbitration under the Act on the relevant grounds or reasons stated in the notice to quit, in pursuance of the provisions of article 6 of *The Agricultural Land Tribunals and Notices to Quit Regulations*, 1959, S.I. No. 81 ; and what is more, that notice must be served within the period of one month from the date when the notice to quit was served upon him. Since the new regulations, the tenant has no longer the right to follow the alternative course which was previously open to him, namely, to wait until the end of the period stated in the notice to quit, and then put the landlord to proof of the reasons in the notice to quit, by refusing to move, and driving the landlord to take proceedings in the courts to eject him.

#### RENT ARBITRATIONS FOR PURCHASERS OF PARTS OF A HOLDING

Not infrequently a landlord sells his reversion in agricultural holdings in parts. This, of course, results in new landlords coming on the scene from a tenant's point of view, in respect of part only of his unit. It is clear enough from section 140 of the Law of Property Act, 1925, that a purchaser of part of a holding may give a valid notice to quit in respect of that part, as long as it is for the whole of that part. What was not so clear, was whether such a landlord could demand arbitration as to rent in respect of the part which he had

purchased. It did seem likely that such a landlord could operate section 8 of the 1948 Act, so as to get the rent reviewed by arbitration without having to obtain the co-operation and joinder of the various landlords of the other parts which went to make up the whole of the tenant's original holding. For instance, section 61 of the 1948 Act makes provision for the compensation of a tenant under the Act when the holding has been split up into several parts. Sections 33 and 60 deal with the reduction of rent and a tenant's compensation respectively in cases where a landlord has resumed possession of part of a holding. Section 32 expressly envisages a split of the reversion and enables a tenant if he wishes to enlarge a notice to quit for part of the holding into a notice to quit for the whole holding.

The decision of the Ipswich County Court Judge in *Paul v. Caldwell* reported in the "Law Journal" 28th October, 1960 at page 704 (see also *Butterworths Weekly Law Sheet*, November 8th, 1960, "The Estates Gazette," for 8th October, 1960, at page 743) clears up this point neatly for practitioners. The judgment establishes that a purchaser of part of a holding, having become thereby entitled to a severed part of the reversion under section 140 of the Law of Property Act, 1925, becomes entitled to have an arbitration as to the rent for that part of the holding, separately from the other parts, and without any need for the other reversioners being joined in the arbitration.

#### "WITHOUT PREJUDICE"

All practitioners are so well-accustomed to this phrase that nothing need be said in these notes to introduce the point. The recent decision of the Divisional Court in *R. v. Agricultural Land Tribunal for the South Eastern Area ex parte Bracey* ([1960] 2 All E.R. 518), and "Law Times" for 24th June, 1960, may possibly have caused some alarm and despondency to practitioners. It might appear to the casual observer from the decision in this case that the court upheld the giving of evidence before the Agricultural Land Tribunal as to certain negotiations and letters and interviews which had in fact all been marked or declared to be "without prejudice" ; but this is not really so. What the Divisional Court did decide, was that a decision of an Agricultural Land Tribunal could not be upset by the proceedings of *certiorari*, because of the erroneous admission of such "without prejudice" evidence, *unless* it was apparent on the face of the Tribunal's decision that such had in fact happened. The court felt that it could not take into account an affidavit filed in the matter which stated as a fact that the evidence which the Tribunal had admitted, was of this type, but could only look at the formal document setting out the Tribunal's judgment and their reasons therein stated for that judgment. In that document although it expressly referred to the letters and negotiations in question, there was nothing to show that the same had in fact been written and conducted "without prejudice".

Apparently therefore, practitioners may continue negotiating "without prejudice", where so desired, for a settlement, in the sure belief that it would not be correct for any court, Tribunal or arbitrator to receive evidence of what happened by those means, if such negotiations proved abortive. Once an agreement by those or any other means is reached, then that agreement is admissible in evidence, because it is an achieved contract which binds the parties.

## Farm Improvement and Horticultural Improvement Schemes

### *Tenders and Vouchers for work to be grant-aided on the basis on actual costs*

The Ministry of Agriculture, Fisheries and Food has suggested that it might be helpful to members of the Institution to have the following information about its requirements relating to tenders and vouchers where work is to be grant-aided on the basis of actual costs under the farm improvement scheme, the horticultural scheme or the schemes for the rehabilitation of livestock rearing land.

The Ministry's method is to require two or, if possible, three competitive tenders on a fixed price basis and normally to approve the lowest of these tenders. It is only in exceptional circumstances that single tenders are accepted and approved.

It is necessary for applicants for grants, or those representing them, to submit the original tenders to the Ministry's divisional officers in every case. Copies or extracts are not

regarded as satisfactory alternatives and divisional officers are not authorised to accept them.

When scrutinising schemes for payment, the divisional officers of the Ministry have to obtain the actual contractor's detailed account and they are required to check this against the approved specification and tender so as to ensure that grant money is paid only for eligible work that has been approved. The divisional officers are not allowed by the Ministry to accept a certificate from a professional adviser to the claimants stating the amount due and paid.

It is believed that there may have been some misunderstandings about the purpose of the precautions described above. The Ministry desires it to be known that these precautions are not ends in themselves but merely the means of ensuring proper accounting for the considerable expenditure of public money which is involved in these schemes.

## Result of Government—N.F.U. Talks

A report has been issued on the talks which took place in May, 1960, between the Ministry of Agriculture and the Farmer's Unions (Cmd. 1249, 9d. net).

The report states that in a full discussion on the level and trend of farm incomes the Unions emphasised the great concern of farmers about the extent to which the industry is expected to absorb increased costs by increased efficiency. Both sides agreed that it was the Government's responsibility to maintain conditions which afford the industry the opportunity of a reasonable standard of living for farmers to pay a proper rent; "as the industry strengthens its competitive power and so advances towards its declared objective of reducing Exchequer support to the minimum practicable amount, it is right and proper that it should have the incentive and reward of an increase in its living standards".

The report also deals with production policy. "Demand for beef is strong and there is clearly scope for expansion of production. There is also need to increase the home supply of pigs, to avoid violent fluctuations and to achieve greater stability. For mutton and lamb the home producer's ability to increase his share of the market will depend upon his

success in reducing costs and improving quality. It is also important that the home industry should become progressively more competitive in marketing." Any increase in coarse grains production will have to be accompanied by steps to contain the Exchequer payment within reasonable limits and to improve marketings so as to steady and possibly raise the market return. The scope for the expansion of wheat production is determined by the possibility of greater use for feeding to livestock. Sugar beet production is limited by the existing factory capacity.

The scope for the production of milk, potatoes and eggs is directly related to producers' ability to expand the size of the market at prices which are remunerative and economically justifiable.

The Government have given an assurance that they would not favour unconditional entry into the European Economic Community. They have also assured the unions that in considering any arrangements, "their concern would be to see whether means can be found of achieving closer European unity without sacrificing the vital interests of United Kingdom farmers and horticulturists".

## Agriculture Announcements

### LAND DRAINAGE ACT, 1930

The Upper Brue Internal Drainage Board have sealed a code of land drainage bye-laws under section 47 of the Land Drainage Act, 1930. Copies of the bye-laws may be obtained from the Clerk of the Board, 11, Chilkwell Street, Glastonbury, Somerset. The drainage district is situated in the county of Somerset.

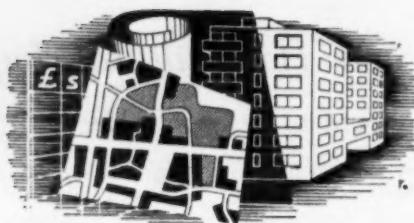
The Hampshire River Board have sealed a code of land drainage bye-laws under section 47 of the Land Drainage Act, 1930. Copies of the bye-laws may be obtained from the Clerk of the Board, The Castle, Winchester. The River

Board is situated in the counties of Hampshire, Wiltshire and Sussex.

### COMPENSATION FOR PLOUGHED UP GRASSLAND

The Minister of Agriculture announced on 19th December, 1960, that the last date on which claims will be accepted for compensation to landowners whose grassland was ploughed under wartime direction will be 31st March, 1961. So far, about £275,000 has been paid in settlement, but only ten claims have been received in the past five years. Compensation is only payable in respect of non-agricultural land, such as golf courses and playing fields, and of agricultural land which is unsuitable for rotational cropping.





## VALUATION · HOUSING · PLANNING

### *Fire Precautions in Buildings*

By F. W. DELVE, C.B.E., CHIEF OFFICER OF THE LONDON FIRE BRIGADE

*The following paper was presented at an ordinary general meeting held at the Institution on 2nd January, 1961.*

#### I. INTRODUCTION

(i) *General.*—The fire loss in 1959 in the United Kingdom and Eire is estimated at £44,179,000 compared with losses ranging between approximately £24,000,000 and £28,000,000 in the previous five years. Moreover, the loss in the first six months of 1960 was nearly £27,000,000, which suggests that the figure for the whole year might be even higher than in 1959.

These losses of valuable productive capacity and materials are something the country simply cannot afford, quite apart from the human suffering caused by injuries and fatalities at fires. It has become more and more important, therefore, to see that adequate precautions are taken to guard against the risk of fire in buildings of all kinds and to ensure, to the greatest possible extent, the safety of the occupants.

(ii) *Statistics of fires and occurrences attended by the London Fire Brigade in the London County Council area—1959—*

Fires (other than grass or chimney) ...	11,390
Fires, grass ...	3,298
Fires, chimney ...	3,617
False alarms—given with good intent ...	3,703
False alarms—malicious ...	2,925
Special services... ..	3,318

Total number of calls attended ... 28,251

#### 2. FIRE PRECAUTIONS—THE OBJECTIVES

The principal objectives of fire precautions in buildings are :—

- (i) to ensure the safety of employees and visitors using public buildings, and of residents in blocks of dwellings, hotels and similar buildings ;
- (ii) to reduce the incidence of fires ;
- (iii) to restrict the internal spread of fire ; to prevent collapse of the structure and to reduce damage, both to the structure and fixtures, fittings and contents ; and
- (iv) to prevent, as far as possible, the spread of fire to neighbouring buildings.

#### 3. THE STATUTORY POWERS EXERCISED BY THE LONDON COUNTY COUNCIL

The fire protection of buildings in London is in general regulated by the provisions of the London Building Acts,

1930-1939, and the London Building (Constructional) Bye-laws, 1952, made by the London County Council under those Acts. Broadly speaking, the bye-laws apply only to new buildings and to alterations and additions to existing buildings. Part IX of the bye-laws prescribes standards of fire-resistance for various classes and sizes of buildings and for the separation of buildings and of parts of buildings which are in different occupation or are used for different purposes.

In addition, sections 34, 35 and 37 of the London Building Acts (Amendment) Act, 1939, require the provision of reasonable means of escape in case of fire in most new buildings and in certain old buildings.

The London County Council have additional powers over the following special classes of buildings :—

(i) No building of the warehouse class or used for purposes of trade or manufacture which exceeds 250,000 cubic feet between division walls and no building over 100 feet high (or 80 feet if the area of any floor is more than 10,000 square feet) may be erected without the consent of the Council under section 20 of the London Building Acts (Amendment) Act, 1939. In granting consent, the Council have power to make conditions restricting the user of the building or any part of it and requiring the provision and maintenance of suitable arrangements for lessening the danger from fire.

(ii) Theatres, cinemas, dance halls and other premises used for public entertainment require a licence from the Council—from the Lord Chamberlain in the case of most theatres in London—and requirements are made to reduce the risk of fire and otherwise to safeguard the public and the staff employed. The Council's regulations for the protection of places of public entertainment from fire deal with construction, exits, seating, heating, lighting and ventilating arrangements and so forth, while the day-to-day management is governed by the Council's rules of management and the Lord Chamberlain's rules and regulations for theatres licensed by His Lordship.

Much of the work arising from the statutory powers described is the responsibility of the London County Council's architect, who, as the Superintending Architect of Metropolitan Buildings, administers the London Building Acts. The London Fire Brigade is particularly concerned, in conjunction with the architect, with the problems of fire



protection in the large trade and warehouse buildings and high buildings controlled under section 20 of the London Building Acts (Amendment) Act, 1939, and in places of public entertainment.

Fire protection arrangements in factories are regulated by the Factories Acts, 1937 to 1959. Until the passing of the 1959 Act, the scope of fire protection control was limited, covering mainly means of escape, fire warning arrangements and certain miscellaneous matters. Certain sections of the 1959 Act—which came into operation on 1st December, 1960—require the provision of adequate fire-fighting equipment and empower the Minister of Labour to make regulations with regard to the internal construction of factories and to reduce fire risks. While the responsibility for the application of these requirements rests mainly with H.M. Inspectors of Factories, apart from the certification of means of escape, which is the London County Council's responsibility, the Inspectors will have power to authorise officers of the London Fire Brigade, with the Council's consent, to enter and inspect factories in order to assist Inspectors in connection with their duties relating to fire.

It will be seen that, when full regard is had to the scope of the foregoing enactments, certain essential aspects of fire protection in many London buildings are not at present subject to any statutory control. The Council, however, are enabled, under the Fire Services Act, 1947, to give advice on any building when requested to do so by occupiers or owners and much good work is done every year in this way.

#### 4. ACCESS FOR BRIGADE APPLIANCES

One of the primary needs for effective fire-fighting is good access to the building involved. Town planning in the past seldom gave adequate consideration to the needs of firemen in fighting fires. Anyone who is familiar with our industrial towns and cities, especially London, knows of the narrow, tortuous roadways in densely built-up areas of high fire-risk where it is impossible to manoeuvre modern fire-fighting appliances and where access is limited to personnel and the equipment they can carry.

Nowadays there is a wider appreciation of fire-fighting requirements amongst town planners; and in London, plans of all housing estates and buildings controlled under section 20 of the London Building Acts received by the Superintending Architect are forwarded to the Brigade to ensure, amongst other things, that suitable access is provided.

The Brigade issues a printed form showing the minimum access requirements. It is available to architects and surveyors on request.

#### 5. HIGH BUILDINGS

Before the war, building in London was generally confined in height to below 100 feet except for occasional architectural features. The present trend is to build higher and higher buildings and in the past few years many buildings of greater height than 100 feet have been erected. The highest building under construction at the present moment is one on Millbank which will have a height of about 387 feet.

In general, a multi-storey building presents a more difficult problem of fire-fighting than a single-storey building, and the greater the height the more complex this problem becomes. Up to the 80 to 100 feet height certain fire-fighting operations can be conducted from fire brigade ladders, but when a building rises above these heights all fire-fighting, and indeed rescue work, must be done from within the building and to achieve this certain features become essential and these can be summarised as follows:—

(i) Satisfactory access for brigade appliances up to entries to a building.

(ii) A means whereby upper floors can be reached quickly.

(iii) A suitable area within the building in which firemen can assemble and prepare their equipment for fire-fighting.

(iv) The means for fighting a fire.

(v) A safe exit should the need to withdraw from a building ever be necessary.

Of the foregoing, item (i) is dealt with in paragraph 4 above, item (ii) can be catered for by the provision of a lift which firemen can take control of by means of a "fire switch" at building entrance level. Such a lift should be of a size and loading that it can carry a crew of firemen with their equipment (not less than 1,200 pounds); be of a speed relative to the height of the building, that is, its time of travel from the ground to topmost storey should be about 1 minute. Above all, the lift must be suitably sited in a ventilated lobby between the floor area and a staircase.

A suitable area (item (iii)) is a ventilated lobby (or lobbies where the floor area is in excess of 10,000 square feet); details of such lobbies are referred to elsewhere in this paper. Means of fighting a fire (item (iv)) is provided for by the installation of dry rising mains up to the 200 feet height, wet rising mains, adequately boosted, above that height and by hose reels and such other fire equipment necessary to tackle the fire risk at large.

A satisfactory means of exit (item (v)) can only be provided by the installation of enclosed fire-resisting staircases, adequately ventilated and suitably sited, one or more of which can be entered only by way of a ventilated lobby.

Other items of concern to firemen in high buildings are the materials used for ceiling and wall linings, construction of partitions, etc., which above the height of 80 feet should be incombustible. One other matter that is adding complexity to fire-fighting problems in high buildings is the increasing practice of fully air-conditioning buildings. When this equipment is installed it should be ensured that the controlled air movement is such that, in the event of a fire, smoke would not be drawn into corridors, staircases or other escape routes.

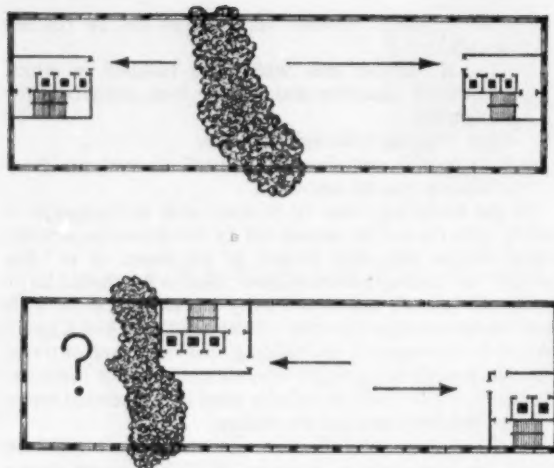
#### 6. MEANS OF ESCAPE

The fundamental here is to provide means whereby persons in any part of an affected building can, by their own unaided efforts, reach the safety of a street. To achieve this requires a sufficiency of exits from each floor area, having regard to the size of that floor area, the number of persons likely to be present and the risk at large in the building. Where staircases form part of an escape route, their positioning is of the utmost importance. It is, for instance, useless to provide an adequate number of escape routes if they are not satisfactorily protected against smoke and fire. This truth increases in importance with the height of the building and becomes crucial in buildings in excess of 80 feet, because any floor above this level is beyond the reach of the fire brigade's highest ladders.

Figures 1 and 2 illustrate an upper floor area which requires two protected staircases to provide adequate means of escape from the floor.

In a layout such as is shown in Figure 1, no matter where a fire occurs, persons on the floor can walk away from it to an exit.

In the example shown in Figure 2, however, although the western staircase may not be an excessive distance from the end of the building, it will be appreciated that persons at this end of the building can go in one direction only to escape. Should a fire occur between them and the staircase, they



FIGURES 1 and 2.

LONDON FIRE BRIGADE  
HQ. DRAWING OFFICE,  
JUNE 1950, N. 603

would be trapped.

The illustrations used are a simple rectangular block; a much more complex layout could have been used but the lesson would have been the same: persons on a floor area should always be able to walk away from a fire to a safe exit route. This may seem very elementary and to be a matter which should be appreciated at student level. However, it is the experience of fire officers that this is not always appreciated or given sufficient consideration by those who design buildings.

#### 7. EXIT STAIRCASES

The positioning of exit staircases has been referred to, but no matter how ideal the position their use is negated if they are not enclosed with incombustible material which will withstand for a reasonable time any fire that may occur. Staircases should always be sited against an external wall where openable windows can vent the staircase; and the openable portion at each storey level should be not less than 15 per cent. of the area of the staircase enclosure.

Doors between the floor area and the staircase should be fire-resisting, self-closing and as smoke-tight as possible. Staircases should discharge into the open air at ground level.

The most satisfactory type of exit staircase is one which is normally provided for fire-fighting purposes and is illustrated in Figure 3.

It will be seen from the drawing that the only way from a floor area to the staircase is by way of a lobby which is separated from the floor area by self-closing fire-resisting doors and, in the case of trade buildings, a steel rolling shutter; it has some permanent ventilation and a potential for much more when the windows are opened.

The ventilation in the lobby provides an emission area for any smoke which may percolate into the lobby from the floor area and thereby protects the staircase from the infiltration of smoke—a matter which could be alarming, if not dangerous, to persons who still have to escape from floors above the fire.

As mentioned above, ventilated lobby staircases are fire-fighting staircases. The lobby is served by a fire lift and contains either a dry-riser or wet-riser hydrant outlet. Firemen can assemble there and prepare to fight a fire in reasonable safety. Indeed, in high buildings beyond the reach of ladders the lobby is the *only* "bridgehead" a fireman has between the staircase and a fire on a floor area.

#### 8. SMOKE-STOP DOORS

Reference has been made to smoke and for the need to keep it out of escape routes and staircases and this may be an appropriate place in which to state "It is smoke that kills." When persons lose their lives as the result of fires in buildings, it is but rarely that burning is the cause of death. Carbon-monoxide in the smoke is the more common cause. It is often the unhappy lot of a fireman to find the body of a person in part of a building which the fire has not reached.

Smoke doors are provided to stop, or at least defer for a reasonable period, the onset of conditions just referred to. The following faults are often found with smoke-stop doors:—

- (i) doors which fit well into a rebate yet possessing a considerable gap between doors and the floor;
- (ii) double swing doors with rebated meeting edges but lacking a suitable selector mechanism to ensure that they close in the correct sequence;
- (iii) double doors without rebated meeting edges, thus leaving too wide a gap between the doors when closed;
- (iv) doors fitted with self-closing devices which fail to function if the doors are opened beyond 90 degrees;
- (v) the fixing on to doors of cabin hooks and other devices to hold them open;
- (vi) the replacing of fire-resisting glazed panels with light glass;
- (vii) the use of wedges, string and other expedients to hold doors open;
- (viii) storage within or near doorways which obstructs the closing of doors; and
- (ix) in some cases doors have been removed altogether because they impede the passage of persons.

The above items, with the exception of the last one, are not rarities and one or more of them can be expected to exist in any building one cares to visit. It is a fact that a man who

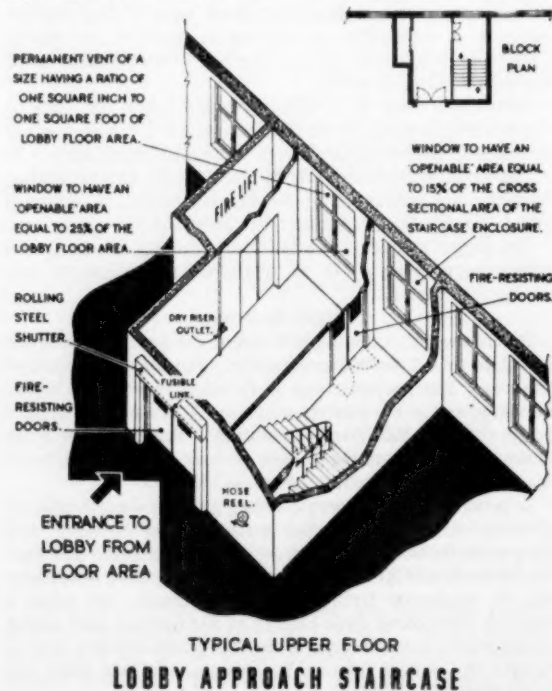


FIGURE 3.

LONDON FIRE BRIGADE  
HQ. DRAWING OFFICE,  
NOV. 1950, N. 597

will spend all his spare time campaigning for a pedestrian crossing will quite casually wedge open a smoke-stop door at his place of work. This cannot be considered wilfulness, but merely ignorance of the door's purpose. Not enough publicity can be given to the axiom, "To close a door may save a life."

## 9. FIRE APPLIANCES

### (i) Automatic sprinkler protection

This is a means whereby water in small-bore pipes at ceiling level is conveyed to discharge heads sited at between 8 and 10 feet centres according to the risk. Each discharge head is sealed by a valve which is held in position by a device which will fail at a predetermined temperature. These devices are either struts soldered together by a fusible alloy or quartz bulbs filled with a liquid which will expand on the application of heat until the bulbs burst.

Some sprinkler installations are "wet," that is, all the pipework contains water, and provided the building is adequately heated there is no chance of the water freezing; others are "dry," that is, the pipes are filled with air under pressure. When the air is released by the opening of one of the discharge heads, this permits water to enter the pipes. These installations are used in atmospheres where the risk of freezing is always present. The so-called "alternative" installation employs a differential valve which allows an installation to be "wet" in warm weather or "dry" in cold weather.

Whatever type of installation is used, the water supply to it should always be adequate to the risk involved. The Fire Officers' Committee lay down regulations for sprinkler installations and most fire insurance companies give a considerable rebate on buildings protected by this equipment.

There is no doubt that automatic sprinklers provide the most effective fire protection for a building and its contents, for not only does an actuated sprinkler give an alarm of fire but it tackles the fire from the outset; and if it does not finally extinguish the fire it will hold it in check until the fire brigade arrives. Many buildings have been saved from destruction by fire because they were protected by sprinklers. Some people still decry such installations, not because they do not extinguish a fire but rather because after the fire has been extinguished the water continues to flow until the installation is shut down. It requires little imagination, however, to picture what damage the fire would have caused if left to burn. It should always be remembered that only the sprinkler heads above the heat of the fire operate and a head passes only a few gallons per minute.

In London the types of premises in which sprinkler protection is required comprise all buildings of the warehouse class, departmental stores, and those used for trade and industrial purposes exceeding 250,000 cubic feet in size; underground car parks and garages over 5,000 square feet in area; any storeys below ground level and theatres, etc.; parts of high buildings used for storage, etc.

### (ii) Automatic Fire Extinguishing Apparatus

It is sometimes necessary to protect plant by special fire-extinguishing equipment, which, like a sprinkler, will operate automatically under fire conditions. Where oil-fired boiler rooms and oil storage rooms are so sited that they offer fire exposure risk and are not readily accessible from the open air for fire-fighting, they should be protected by a suitable automatic installation. These automatic fire-extinguishing systems must be capable of extinguishing an oil fire. They can be of a type which uses water in the form of a fine spray, or of a type which produces foam in sufficient

quantity to blanket the fire area.

Where rooms house oil-cooled transformers or other oil-immersed electrical equipment and they too are awkwardly sited, an automatic fire-extinguishing system is necessary. It is usual to protect such rooms with an automatic carbon-dioxide installation. As extinguishing by this means depends on the dilution or displacement of the oxygen in a room to a level below which burning can take place, it is necessary that on the operation of the installation any ventilation openings in the room will be automatically sealed by shutters or some other means. Owing to the danger to life should carbon dioxide be released into a room when anyone is present such installations are fitted with a "lock-off" device which precludes the automatic operation.

### (iii) Internal Fire Hydrants and Hose Reels

Internal fire hydrants with large diameter hose for use by the occupiers of a building are generally not required or recommended these days. The use of such equipment requires more than one person to operate it and it cannot be effectively used unless those persons are specially trained. Internal fire hydrants would be required for the use of fire brigades in buildings which exceed 200 feet in height, and those where fire mains in the streets are not immediately adjacent.

It is the current practice to install in buildings hose reel equipment which consists of not more than 100 feet of  $\frac{3}{4}$ -inch tubing fitted to a reel and hydraulically connected to a satisfactory water supply. The discharge end is fitted with a shut-off nozzle of  $\frac{3}{8}$ -inch diameter. The water supply should provide a flow of 30 gallons per minute at 30 pounds per square inch at the highest outlet.

Such equipment is easily used by persons of either sex without any special training. For many years, hose reels have formed part of the equipment on fire brigade appliances, and are used to extinguish more fires than any other equipment.

Hose reels should be installed at or by exits from a floor and in such a position that their operation will not hold open smoke-check doors, and where they will give cover to the whole of the floor area. Where hose reels are installed in this manner, it should not be necessary to provide hand extinguishers of the water-expelling type.

### (iv) Dry Rising Mains

These are fire mains suitably sited within a building and are not charged with water; they are of 4-inch diameter with inlets in the external face of the building at ground level, into which hose from fire brigade pumps can be connected. Valve-controlled outlets to which fire brigade hose can be connected are provided at all levels above the ground floor.

Dry rising mains are provided in all high buildings up to 200 feet in height (this is the maximum height to which brigade pumps can be effectively used), and their purpose is to allow fire-fighting to commence quickly at high levels. Without such mains it would be necessary to lay hose up a staircase or up the outside of a building, which not only takes time, but produces a fatigue factor in fire-fighting before the fire is actually tackled. It is recommended that dry rising mains be provided in all buildings exceeding five storeys in height.

In buildings exceeding 200 feet in height a wet rising main is required and to ensure that water is available at these high levels they must be provided with two independent sources of water supply and dual pumps with an alternative power supply, to provide a minimum pressure of 60 pounds per



square inch at the highest outlet—in residential blocks 200 gallons per minute minimum flow, office blocks 300 gallons per minute. Industrial occupancy will never reach the 200 feet level. Pressure-reducing valves are necessary for the outlets on the lower floors to provide a pressure not exceeding 75 pounds per square inch.

(v) *Smoke Outlets*

Fires in basements, where the limited outlets cause smoke and heat to build up rapidly, are some of the most difficult that fire brigades are called upon to tackle. To assist in clearing smoke and heat from below ground floors, smoke outlet shafts are required in such number and in such positions as to ensure that a through draught can be formed. The covers to these outlets usually take the form of pavement lights or stallboard lights, which can be broken by firemen. Such outlets should be permanently marked by a tablet indicating the area they serve (see Figure 4).

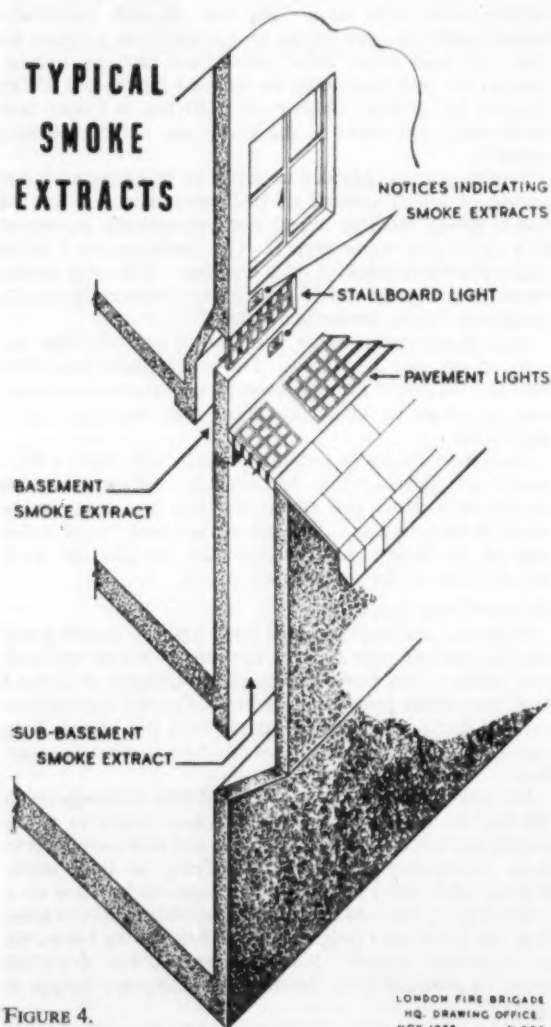


FIGURE 4.

LONDON FIRE BRIGADE  
HQ. DRAWING OFFICE  
NOV. 1955. N. 698

(vi) *Foam Inlets*

In cases where the fire separation is satisfactory but the oil fuel boiler or storage chamber is not readily accessible for fire-fighting, a foam inlet may be installed. This consists

of a 2½-inch diameter pipe fitted with a connection at street level to which the brigade can attach their foam making equipment, and terminating in the boiler room or storage chamber.

10. **AUTOMATIC FIRE ALARMS AND SMOKE DETECTOR SYSTEMS**

These consist of means whereby detector heads, suitably fitted at ceiling level, will give an early warning of fire within the building, and show on an indicator board in what part of the building a fire has started. An automatic device can be integrated with the alarm system so that the fire brigade will be called immediately on the operation of the automatic fire alarm system, via the "999" system.

Alarm systems are electrically operated, preferably by a battery, thus ensuring the operation of the system when the electrical supply to the building is shut off. Automatic fire alarms are generally of the following types:—

*Fixed temperature type.*—A bi-metallic strip device is set to operate at a predetermined temperature between 140° and 160° F. This type of head is usually provided with a compensating device to allow for a natural rise in ambient temperature without the operation of the detector.

Another type of fixed temperature detector consists of wires carrying the circuit current and possessing a number of soldered joints which will melt at a predetermined temperature, thus allowing the wires to part. The breaking of the circuit operates the alarm system.

*Rate-of-rise Systems.*—This has a detector containing two coils of fine wire, or other device, which are of balanced resistance. One coil only has a thermal protection to it. On a sudden rise in temperature the unprotected coil (or device) is heated more quickly than the protected coil, causing an upset in the electrical balance which, by means of relays, will operate the fire alarm system.

*Tubular Systems.*—In such systems a small diameter copper tube is run at ceiling level; within the tube is a liquid that expands readily on the application of heat. A rise in temperature increases the pressure within the tubed system and causes the movement of sensitive diaphragms which in turn operate the electrical side of the alarm system.

*Smoke Detectors.*—These can be of two types. One consists of a light beam which operates photo-electric cells when the solid particles in smoke pass through the beam. The other is known as nuclear detection. This has a detector head in which there are two chambers in which the air is ionised by alpha particles emitting from a small quantity of radium. On smoke entering a chamber, the electrical characteristics are changed and this operates a special cold cathode tube which in turn allows current to pass to the relay which operates the alarm.

Any of the foregoing, when properly installed, will detect a fire in its early stages and give an alarm but, unlike a sprinkler installation, they do nothing to extinguish it.

11. **BASEMENT PLANS**

These are a further aid to tackling basement fires and consist of scale plans of below ground floors showing all exits, passageways, rooms, plant, services, smoke outlets, special risks, and any other relevant data, including a dimensional scale.

Plans should be about 4 feet square and framed and glazed. They should be displayed at ground-floor level at the head



of staircases leading to basements, and should be affixed to the wall in such a manner that they can be readily removed for orientation. Each plan should have marked on it an arrow indicating the position at basement level which relates to its position at ground level, *viz.*, the tail of the arrow having a circle or box in which are the words "You are here at ground level." All passageways leading to exits should be coloured green.

## 12. MANUAL FIRE ALARM SYSTEMS

These are required in factory premises by virtue of the Factory Act, 1937, and they should be installed in any other type of premises which offers a risk to life from fire by nature of the contents housed or because the contents are such that will allow a quick growth of fire, *e.g.*, some chemical works where the heat from a fire will produce dangerous gases or render the contents unstable in some other way; departmental stores where the free display of combustible goods over large areas permits a quick fire travel.

A fire alarm system has two functions; first to ensure that a person discovering a fire can readily, and without danger to himself, give the alarm, and, secondly, it offers the means whereby the alarm is transmitted throughout the building.

The simplest system is that where hand-bells or sounders are suitably sited in a building and a person finding a fire goes to a bell or sounder and rings it. This system has the weakness that a person, because of excitement or because of a desire to get back and tackle the fire, may not sound the alarm long enough for it to be heard everywhere. Also, if the building is of a size demanding the use of more than one bell, it follows that it entails that any person hearing an alarm sound in the distance must then go and sound the nearest alarm. This form of human relay, without constant practice, can be most unreliable.

A suitable form of electrical alarm system is one in which break-glass call-boxes are sited in suitable positions so that a person going to one is also travelling a route of escape from the building. The breaking of the glass releases a contact button which causes bells or sirens to ring throughout the building as an alert, or a signal, to the occupiers to leave. It can, at the same time, show the position of the call-point operated on an indicator board, which is usually sited by a ground-floor entrance. Indicator boards should always be provided in buildings where valuable time may be lost in searching for a fire. Such systems should be battery-

operated, thus making them independent of the electrical supplies to the building.

Another way of providing an effective fire alarm system in a building is by adapting the internal dial telephone system. A special telephone coloured "red" is installed in a position which is constantly manned, *e.g.*, the switchboard, and it should be used for no other purpose than receiving fire calls, its dialling number being indicated on the face of all telephones in the building with the words "for fire dial (appropriate number)" and a similar notice put into any directory for the building. Means must also be provided at the switchboard for sounding an alarm throughout the building and an internal exchange telephone for calling the fire brigade.

No matter what form of fire alarm system is installed, its efficiency must be related to its constant maintenance and testing; to the provision of suitable and clear instructions as to its use and to the action to be taken when an alarm sounds; and finally to the carrying out of regular fire evacuation drills.

## 13. CONCLUSION

Many lessons can be learned from practical experience on the fire ground; some of these lessons and the appliances and equipment described in the foregoing paragraphs will be illustrated on slides.

I hope that the information given in this paper and the lessons learned from fires, as illustrated on the film strip, will prove of value to members of the Institution. Needless to add, if any member should desire further information on any of the subjects dealt with, or indeed on fire prevention measures generally, I hope that he will not hesitate to get into contact with the Fire Prevention Branch of the London Fire Brigade.

It has been a great pleasure to me to present this paper and I sincerely hope that as a result there will be a better understanding by the Institution's members of the whole field of fire prevention. As stated in the opening paragraphs of this paper, the annual fire loss is alarmingly high and it must be remembered that the figures quoted do not include what might be called the indirect or consequential losses. A serious fire may cause unemployment and loss of trade out of proportion to the materials actually destroyed in the fire. It is important, therefore, that all concerned should at all times endeavour, in the national interest, to reduce such losses to the minimum.

# Form No. 94 London County Council—London Fire Brigade

## NEW HOUSING ESTATES AND BLOCKS OF FLATS AND MAISONNETTES

### 1. ACCESS TO ALL BUILDINGS, IRRESPECTIVE OF HEIGHT, FOR FIRE-FIGHTING AND RESCUE

(a) Access should be provided by one or more carriageways or paved courtyards at least 10 feet wide to enable a fire brigade pump or escape-carrying appliance (weight approximately 10 tons) to be driven to within 60 feet (measured horizontally) of every dwelling. Manhole and public utility service pit covers in the routes of access should have a load-bearing capacity of 10 tons. (For requirements for high blocks see paragraph 2.)

(b) Where necessary, access strips should be provided from carriageways or paved courtyards to enable a wheeled escape (weight approximately 15 cwt.) to be brought to every building exceeding two storeys and to be taken along the entire length of one face of every such building (see also (c) below). Access strips for wheeled escapes should be at

least 10 feet wide and, where a strip runs parallel to the face of a building, the inner edge should be between 10 feet and 15 feet from the building.

(c) Where flats or maisonnettes are "back-to-back" there should be access by carriageway or paved courtyard to both sides of the block and, if necessary, a strip for a wheeled escape along the entire length of each side of the block, to give the fire brigade direct access to each flat or maisonnette.

(d) Where approaches and forecourts are enclosed by fence or wall, there should be access gates having a clearance of at least 8 feet 6 inches wide and 11 feet 6 inches high. Access gates should be openable from each side and locks should be of a type that can be forced without difficulty by the fire brigade.

(e) A turning circle of 54 feet diameter exclusive of overhang should be taken into consideration when making provision for the access and manoeuvrability of fire brigade

appliances and sufficient additional turning width should be provided where corners have to be negotiated.

Diagrams showing the turning circles of a pump-escape and a turntable ladder are attached for guidance. As these diagrams show transition curves for travel in one direction only, it must be remembered, when planning a suitable turning circle, that the curves will need to be repeated in the opposite direction.

## 2. HIGH BLOCKS OF FLATS

(a) Blocks of flats and/or maisonettes having floors, exceeding 42 feet in height (measured as defined in the London Building Acts (Amendment) Act, 1939, Section 33 (1)), necessitate the use of turntable ladders, both for rescue and fire-fighting purposes. In such cases a carriageway at least 12 feet wide and capable of taking the load of a 100 foot turntable ladder (12 tons) should be provided to enable a turntable ladder to reach the front part of the building and, except where the block is planned with a single enclosed staircase approached through an open ventilated lobby without having to pass other occupations en route, to reach every part of all escape balconies or, where balconies are not provided, to reach each individual dwelling. If the approach is by a paved courtyard in lieu of carriageway, a suitably reinforced and easily distinguishable strip 12 feet wide should be similarly provided.

(b) Carriageways and reinforced strips for turntable ladders should be sited so that the distance between the building and the inner edges is not less than 16 feet or more than 33 feet. The most satisfactory distance for rescue purposes is 20 feet; 33 feet is the absolute maximum. It must be remembered that the use of a wheeled escape may also be necessary to floors below 42 feet and the necessary provision should be made in this respect (see paragraphs 1 (b) and (c)).

(c) The foregoing requirements are not exhaustive and the peculiarities of any particular layout will have to be considered on their merits; they are also based on the assumption that means of escape will be provided in accordance with the requirements of the Council.

NOTE.—Where blocks of dwellings exceed 100 feet in height, special consideration may need to be given to access requirements.

## 3. OBSTRUCTIONS TO ACCESS

All access ways for fire brigade appliances should be kept clear of obstructions. In siting any enclosing wall or fence to a forecourt, an area between 15 and 20 feet from a building should, therefore, be kept completely unobstructed. Such things as lamp-posts, telegraph poles or trees, etc., should in particular not be allowed to obstruct fire brigade access to a building.

Where it is necessary to prevent unauthorised traffic using access ways, one of the following alternatives should normally be adopted:—

(a) Vertical posts at least 8 feet 6 inches apart, with a removable cross-bar secured in position with a light padlock.

(b) Posts each hinged at or near the base to fold towards the building and secured in the upright position with a light padlock. These posts, when in the horizontal position, should lie on the same axis as the access way and should not project more than 6 inches above ground level.

(c) Removable posts secured in position with a light padlock. The sockets for these posts should not project more than 6 inches above ground level.

In all cases the padlocks should be so placed that they are easily accessible for removal by firemen.

Before any obstructions of this kind are fixed, it is recommended that the proposed arrangements should be agreed with the Chief Officer of the London Fire Brigade Headquarters, Albert Embankment, S.E.1. (RELIANCE 3811, Ext. 21.)

## 4. DRY RISING MAINS AND FIRE LIFTS

Dry rising mains are normally recommended in blocks of flats or maisonettes exceeding five storeys in height and not exceeding 200 feet in height. Where the building exceeds nine storeys at least one lift should be adapted as a fire lift to enable the fire brigade to obtain immediate use of it for fire-fighting operations.

## 5. WATER MAINS AND HYDRANTS

(a) Building development in congested districts often necessitates the closing of thoroughfares and the laying dead of mains. It will be necessary to decide in such cases whether any hydrants affected may be abolished or whether they should be refixed in new positions. The cost of such work will normally be borne by the estate developer, but the cost of renewing any fittings which may be considered desirable will be borne by the London Fire Brigade.

(b) The cost of any additional statutory fire hydrants will be borne by the fire brigade.

(c) It may not be practicable, however, to provide adequate cover by the installation of statutory fire hydrants. In such cases it may be expedient to install private fire hydrants, sealed in preference to metered, and normally fed by a supply pipe at least 4 inches in diameter. The London Fire Brigade will advise on such installations.

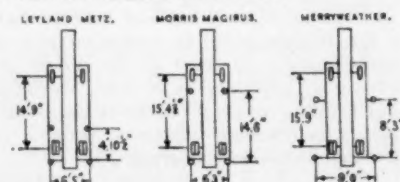
(d) Private hydrants should be underground hydrants of sluice valve pattern to conform to British Standard No. 750 of 1950. They should be installed in footways immediately adjoining the access carriage ways or paved courtyards referred to in paragraphs 1 and 2, and the top of the outlet and spindle should be less than 12 inches below the surface. The frames and covers should be in accordance with paragraphs 17 and 18 of the British Standard and the positions of the hydrants should be indicated by standard plates as detailed in Appendix D to the Standard.

(e) When new mains are to be laid by the Metropolitan Water Board, consideration must be given to the proposed sizes in relation to fire-fighting requirements and it may be necessary for the London County Council, as the fire authority, to exercise its powers under section 14 of the Fire Services Act, 1947.

FORM NO. 94, Appendix I.

## LONDON FIRE BRIGADE APPLIANCES.

### (A) TURNTABLE LADDERS.

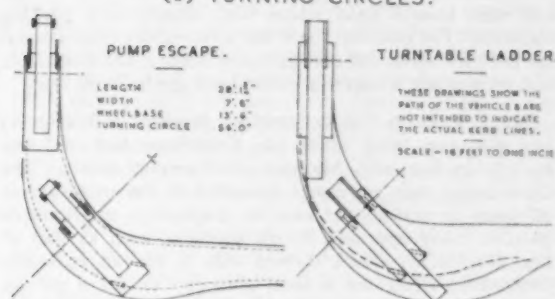


Track of rear wheels	... 5ft. 9ins.	5ft. 9ins.	5ft. 9ins.
Diameter of jack plate	... 8ins.	10 1/4 ins.	6ins.
Width of bearing surface on perimeter of jack plate	... 1 1/4 ins.	1 1/2 ins.	3/4 ins.

NOTE.—Jacks are provided mainly as stabilisers, the main weight being taken on the road wheels. Under normal working conditions the weight on a jack should rarely exceed two tons. Only a failure of rear springs or tyres would put the whole load on the jacks.

Width of roadway required ...	12 feet
Turning circles, all makes ...	54 feet diameter
Weight of heaviest turntable ladder ...	12 tons approx.
Weight on rear axle ...	8 tons
Average length of turntable ladders ...	32 feet 5 inches
Average width of turntable ladders ...	7 feet 6 inches

(B) TURNING CIRCLES.



## Off-Street Parking

At the ordinary general meeting on 5th December, 1960, Mr. E. H. Doubleday, O.B.E. (Fellow), P.P.T.P.J., M.I.Mun.E. read a paper entitled "Off-street Parking." The paper was published in the January issue of The Chartered Surveyor at page 500 and a brief summary of the ensuing discussion is published below.

Mr. A. L. HORTON (Professional Associate) said that Mr. Doubleday's paper appeared to have been written mainly with the very large towns of America in mind and, presumably, its principles could be applied to equivalent sized towns in Britain. However, British towns of, say 40,000 population of which there were very many, had similar traffic problems. Could the methods suggested in the paper be used for helping to solve traffic problems in smaller towns?

Mr. DOUBLEDAY, in reply, agreed that his paper concentrated on the larger towns and cities, because this was where the problem was most acute, but it should not be thought for a moment that it was unnecessary to make a survey in towns of 40,000 to 50,000. He had seen many small towns in America where they had gone very thoroughly into the question of a survey. In most of them, the structures were of the simple two-storey ramp type.

Mr. G. A. COOMBE (Fellow) said that the author had suggested that municipal authorities should provide the off-street garage accommodation free. Surely the motorist was not entitled to free parking on welfare state principles, and on such a basis local authorities would never be able to touch more than the fringe of the problem. If the motorist wished to bring his car into the city centre and to leave it there, he should be prepared to pay for the privilege.

In Cleveland, Ohio, which was, as far as was known, the only city where the motorist was not allowed to park anywhere on the streets and if he did so his car was immediately towed away, the off-street parking problem had been solved by private enterprise providing the garaging and charging for it. The director of the public transport there had stated that as a result it had been possible to cope with the greatly increased passenger load with only three-quarters of the public service vehicles used previously. This had been because the buses could move along the streets so much faster.

Mr. DOUBLEDAY, in reply, suggested that one reason why our multi-storey garages had not been successful was that there had been no compulsion placed upon the motorist, at present parking in the street, to use them.

The free movement on the streets in America as a result of off-street parking had improved markedly. Anyone visiting

America would notice this at once, but it was combined with many other facilities and provisions such as restrictions on parking in certain roads, the elimination of what in Britain would be right-hand turns and the restriction of the use of parking meters in certain travelling hours. As a consequence, traffic travelled through in a fast stream at peak hours.

Mr. J. L. WALDRON (Assistant Commissioner in the Traffic and Transport Department of New Scotland Yard) said it was quite true that the highway should be kept free and the police did as much as they could to promote the free movement of traffic. Because the centre of London had not been free in this way, and also in order to allow some short-term parking, the Parking Meter Orders had been introduced in north-west Mayfair two years ago and subsequently in south-east Mayfair, Marylebone, Holborn and St. James's. This allowed for short-term parking for 2 hours. No arrangements had been made for the long-term parker, and this was why the provision of off-street garage accommodation was important.

When the parking meter zones were first introduced, such garages as those provided by Selfridges were almost empty for a year. It was much easier for the motorist to park his car on the street for nothing, than to pay 7s. to park it off the street.

As police enforcement tightened, however, and as the wardens were introduced, the situation changed, and it was now virtually impossible to get into some of the smaller garages in the West End. Even the Selfridges garage was nearly full. That was why, during the Christmas shopping period, extra car parks were being introduced. The biggest vacant site—Horseguards Parade—could take up to 600 cars.

Miss D. R. LANE (Professional Associate) referred to two areas about to be laid out as public open spaces by the London County Council—one south of Bethnal Green Road and the other north of Old Street. The ground level of substantial portions of the areas was 5 to 10 feet below adjacent streets, the sites having formerly been occupied by houses with basements. Was it practicable and economic to lay out these open spaces with car parks in the basement, making use of the roof of the garages to lay out a public open space?



Mr. DOUBLEDAY said that the answer was "Yes". He had seen several open spaces with underground parking facilities. For instance, there was a two-storey underground car park for about 500 cars in Union Square, San Francisco, and on top was a beautiful ornamental garden with trees.

Mr. I. V. PUGH (Under-Secretary, Ministry of Transport) said that everything which Mr. Doubleday had said was entirely in line with Ministry of Transport policy. The Government was extremely interested in the provision of off-street car parking but were not prepared to contribute to its cost. Any approach to the problem, such as that of Mr. Doubleday, which showed that it was an economic proposition either for a local authority or for a private developer was therefore welcome from the Ministry's point of view.

Commenting on the provision of car parks under open spaces, he said that the Government were making this possible for the first time by making available land under some of Hyde Park, at Speakers' Corner, where there would be room for 1,000 cars. In view of public sentiment about the Royal Parks this had been a considerable step to take.

In a Bill which had just been given a second reading in the House of Lords, dealing with public health, there was a provision permitting local authorities, on open space or parkland, to use up to one-eighth of the space for garaging, either on the surface or underneath.

Mr. Doubleday had referred to the increasing use of self-service for garages in the United States, presumably involving the use of parking meters. How did they ensure that a man paid the appropriate amount?

Mr. DOUBLEDAY, in reply, gave the example of the Rochester garage mentioned in the paper, which was a seven-storey garage holding between 600 and 700 cars. As the motorist drove in, his car disturbed an electrical pad, generating an impulse on an electronic screen, which informed the motorist how many car spaces were available. From this he could tell that he should drive to a certain floor where there were, for instance, some vacant places. A green light led him all the way up the ramp. A red light indicated that the floor was full. All the apparatus was electronically operated.

Having parked, the motorist inserted his money in the meter for the appropriate parking time. From time to time a member of the garage staff of two went round and checked that everything was in order. There were loudspeakers on every floor, and through this it was possible to call down to the men below that a motorist had exceeded his parking time. When this motorist drove down the ramp on his way out, he was called into a lay-by where he paid the extra parking fee.

Mr. W. S. GOODBODY (Fellow) reported that a spiral ramp car park had been opened in Bristol. It was self-operated without parking attendants on an arrangement very similar to that which the author had described. A system of stamping the time was used, and the motorist paid as he left with his car. Two men and a girl were employed, and the girl could probably be replaced by an automatic stamping machine. The ramp was a half mile in length, at a uniform gradient of 1 in 32 and with continuous car spaces on both sides.

Dr. N. LICHFIELD (Fellow) proposing a vote of thanks to the author, said it had been somewhere stated that what Manchester was to London, so the United States was to Britain; just as London followed Manchester so did Britain the United States. He would not suggest how true this was

generally but it seemed true in relation to the motor vehicle; in America we saw the kind of picture which would subsequently emerge in England. For that reason, anyone who brought back information from America on this subject was entitled to our gratitude, as was Mr. Doubleday for his comprehensive and meaty paper.

He (Dr. Lichfield) had recently returned from a rather more extended visit to the United States, and had found the paper of particular interest as he could recall so many of the things reported in it. He ought to counteract the suggestion that all Americans were philistine in their approach to open spaces. In San Francisco, a proposal to use the existing park in Portsmouth Square for an underground garage had aroused great opposition because the square would lose its landscape character and historical associations, the latter going back every bit of 100 years!

A noticeable feature of American central areas was the large amount of open lot car parking and garage structures. In Los Angeles, he had been told, as much as 30 per cent. of the total central area was used for car parking. This was not typical, because Los Angeles was exceptional in every possible way, but certainly a lot of car parking was available. Another interesting feature was that parking garages could be found in the main business streets, containing hotels, shops and offices. As Mr. Doubleday had said, these were not easy neighbours in the street scene, but some of the attempts to fit them into the streets had been quite successful.

Both of these features—the large amount of parking available and the presence of garages in business streets—meant that the provision of these facilities was profitable to private enterprise. The important question immediately arose—how can they do it when we find it so difficult to get private enterprise to invest in these facilities on the scale that we would like to see? To answer this question it is necessary to go into comparative figures for the cost of structure, operating costs, amount of time for which the car park was used, etc.

One contributory factor which stood out was that the American motorist paid more than us in parking charges. Mr. Doubleday had given the typical figure of 1.25 dollars a day (about 10s.); in some places more was paid and in some less. But direct comparison with our own charges was a little unfair. The rate of exchange was 2.8 dollars to the £, but his experience suggested that a U.S. resident needed about 4.5 dollars to make £1 go as far as it did here. This meant that a cost of 1.25 dollars to an American was about 5s. 6d. to us. This was not over high compared with some of the charges we were beginning to meet. In odd car parks in central London 7s. a day was being paid and 4s. to 6s. in Birmingham and 5s. in Exeter. It was, therefore, necessary to look beyond these charges to find the true answer; Mr. Doubleday had suggested, for example, the American economies in operating costs.

Another interesting point on the car park charge was the claim made here that one way to discourage motorists from entering central areas was to charge them the economic cost of parking. This was done in America, however, and the motorists still came. Their experience thus showed that there was quite a lot of financial resilience among motorists who were, after all, the same people as those who seemed to be able to absorb any amount of taxation in prices of tobacco and drink.

Mr. Doubleday had referred to the merchant validation schemes, which were typical of the great interest which the business community took in car parks. They were prepared



to subsidise them; or rather apparently to subsidise them for of course the consumer eventually paid. This interest extended throughout many a downtown area. When it found that the shortage of car parking was driving people elsewhere they took a very active interest in its provision. He wondered whether this would eventually hit business people here.

There was one major thought which might put a bomb under the whole business of central car parking. Some Americans were asking "Is the game worth the candle?" Having spent millions of dollars on car parks and urban freeways, they were wondering whether this was the solution. If not it was a bottomless pit of expenditure. One lesson to be learned was therefore the need to look into the whole problem to see whether car parks and urban freeways were in fact the solution. If it was not, and some other answer was necessary, now was the time to say so, before we embarked on too big a programme.

In conclusion, he reiterated thanks to Mr. Doubleday and congratulated him, not only for the paper but also for the competent and genial way in which he had answered questions.

MR. R. G. FANSHAW (Fellow), seconding the vote of thanks, said that the meeting had seen from the car registration figures in the paper and the speed at which they were increasing, as well as from Mr. Doubleday's assessment of the increase likely in the years ahead, that the problem of off-street parking concerned us as surveyors and as ordinary road users.

Unlike other speakers he had not been to America and therefore his feet were firmly on the ground. It occurred to him that one reason why we had some difficulty in encouraging people here to use these garages was that we were not nearly as free with our money as were the Americans. We had a feeling that it was part of our freedom to draw up by the kerbside, wherever we felt inclined, and he feared that we should prefer to do that and risk the possibility of a tap on the shoulder from a gentleman wearing a blue cap and a yellow band rather than pay the garage charges.

Was it not fair to suggest that the provision of off-street car parking required the linking of public and private enterprise? It seemed to him that if private enterprise provided an off-street car park it was providing a facility which was of great benefit to the travelling community and it was therefore not unreasonable to suggest that some form of Government grant should be made towards the initial cost which surely must be very heavy. We needed off-street parking in the heart of cities where land was very expensive and structures could not be built cheaply.

For those reasons and many others, which had been suggested during the discussion, the subject was of interest to everyone. He was sure that the meeting would agree that Mr. Doubleday had given a clear and concise paper, a wealth of information and much food for thought. They were grateful to Mr. Doubleday, and he had great pleasure in seconding the vote of thanks to him.

## Lands Tribunal Decisions

Reviewed by W. M. HATTERSLEY, B.Sc. (Professional Associate)

### (1) TOWN & COUNTRY PLANNING ACT, 1959— OWNER-OCCUPIERS

The first two decisions of the Lands Tribunal under the Town and Country Planning Act, 1959, have now been made and, although of interest on this ground alone, they are also of particular interest because they deal with similar subject matter; that is the effect of the provisions of part IV of the Act which deal with the obligation of "appropriate authorities" to purchase the interests of owner-occupiers affected by planning proposals.

The object of this part of the Act is to relieve owner-occupiers from hardship caused by the effect of planning provisions contained in a development plan or otherwise, which indicate that the land is likely to be compulsorily acquired at some future time and thereby the land becomes "blighted."

Although the object is to relieve hardship by creating an obligation on the part of the appropriate authority to acquire the land in such cases, where the relevant statutory "specified descriptions" apply, the statutory test, which determines whether or not the provisions of the Act apply, is one of unsaleability except at a price substantially below normal open market value.

The fact that both the first two decisions under the Act relate to this matter does show that such cases of hardship exist and it is of interest to see how the powers of the Tribunal under section 41 work in practice.

Before dealing with the two cases in detail, it will make them easier to follow if the statutory procedure to be followed is first noted. These are all contained in part IV of the Act and the fifth schedule.

(1) Under the provisions of section 39, an owner-occupier must first serve on the appropriate authority a notice requiring that authority to purchase his interest. He is only entitled to do this provided he is the "resident owner-occupier", or the net annual value of his property for rating does not exceed £250, and also provided his property is comprised in land of any of the "specified descriptions" which are set out in section 39 (1) and which include land designated by a development plan as subject to compulsory acquisition; land allocated in a development plan for the purposes of the functions of a government department, local authority, etc.; land required for highway purposes, etc.

In making his claim, the claimant must fulfil, *inter alia*, the following conditions (section 39 (2)) :—

"(a) He is entitled to an interest in that hereditament or unit, and

(b) the interest is one which qualifies for protection under this part of this Act, and

(c) since the relevant date he has made reasonable endeavours to sell that interest, and

(d) he has been unable to sell it except at a price substantially lower than that for which it might reasonably have been expected to sell if no part of the hereditament or unit were comprised in land of any of the specified descriptions."

The appropriate authority may, within two months, serve a counter-notice on the claimant objecting to the notice on the following grounds (section 40 (2)) :—

"(a) That no part of the hereditament or agricultural unit to which the notice relates is comprised in land of

any of the specified descriptions ;

(b) that the appropriate authority (unless compelled to do so by virtue of this part of this Act) do not propose to acquire any part of the hereditament, or (in the case of an agricultural unit) any part of the affected area, in the exercise of any relevant powers ;

(c) that (in the case of an agricultural unit) the appropriate authority propose in the exercise of relevant powers to acquire a part of the affected area specified in the counter-notice, but (unless compelled to do so by virtue of this part of this Act) do not propose to acquire any other part of that area in the exercise of any such powers ;

(d) that, on the date of service of the notice under the last preceding section, the claimant was not entitled to an interest in any part of the hereditament or agricultural unit to which the notice relates ;

(e) that (for reasons specified in the counter-notice) the interest of the claimant is not an interest qualifying for protection under this part of this Act ;

(f) that the conditions specified in paragraphs (c) and (d) of subsection (2) of the last preceding section are not fulfilled."

If a counter-notice is served, then the claimant may, within two months, refer the objection to the Lands Tribunal under section 41. The Lands Tribunal must uphold the objection, "unless it is shown to the satisfaction of the Tribunal that the objection is not well-founded," except in the case of grounds (b) and (c) of section 40 (2), where the objection will not be upheld "unless it is shown to the satisfaction of the Tribunal that the objection is well-founded."

The above then is a summary of the procedure and the relevant statutory provisions and gives a background to the consideration of the two cases that have been referred to the Tribunal under section 41.

The first case was that of *Mrs. A. Oxley v. The Borough of Keighley* (Ref/18/1960), which concerned a house and premises, known as Rock Cottage in Keighley in the West Riding of Yorkshire.

The claimant purchased the property in 1954, improved it and, since 1956, had been endeavouring to sell it. The claimant stated that on at least three occasions she nearly effected a sale, but it always fell through because of planning proposals by the local authority.

The claimant contended that her property was a hereditament falling within "specified description" (f) of section 39 (1), which is as follows :—

Land shown on plans approved by a resolution of a local highway authority as land comprised in the site of a highway as proposed to be constructed, improved or altered by that authority.

The Corporation of Keighley objected on ground (a) of section 40 (2) (see above).

The plan which gave rise to all the trouble was one which was prepared in 1933 by the Keighley and District Joint Town Planning Committee under the provisions of the Town and Country Planning Act, 1932, and which was withdrawn before the 1947 Act came into force. It was headed Ilkley and District Group Joint Town Planning Scheme, Draft Scheme Map, but with the word "draft" neatly crossed through, conveying the impression that it was no longer a draft. This map showed, *inter alia*, a proposed new road, which would have involved the demolition of Rock Cottage.

In the approved development plan for the West Riding of Yorkshire there was no proposal for a road in this position and the claimant was informed by the Corporation that "the

road is not shown on the town map and is not likely to be laid out in the foreseeable future."

The Corporation's case was that the 1933 plan, because it was never approved and was subsequently withdrawn, had no legal significance and in any event the Joint Town Planning Committee was never a local highway authority within the meaning of section 39 (1) (f).

The Tribunal agreed with this latter contention and accordingly held the objection of the Corporation to be well-founded, but remarked as follows concerning their point that the 1933 plan was of no legal significance :—

"Why then is it trotted out to the alarm and consternation of people who are concerned with land that might have been affected by it ? . . . perhaps it would be wrong to destroy a plan of this kind, and perhaps there are occasions when it is proper to exhibit it. But manifestly, if that be the case, a verbal explanation of what it is by the official who produces it is insufficient. I think more steps might have been taken by the corporation to ensure that the obsolescence of this plan was emphasised—for example by a bold over-printing of the title page. If in future some such steps are not taken, this land will remain blighted ; in which case, so far as I can see, its owner has no remedy at law."

Patently this was a case where part IV of the 1959 Act should have applied but, through no fault of the owner, the facts could not be fitted to come within any one of the "specified descriptions." A reported case—per the Tribunal.

"But I have sympathy with the claimant with whom, in my opinion, are all the merits of the case. The purpose of this part of the 1959 Act is to afford relief to owners whose land is 'blighted' by town planning proposals. I have no doubt that this particular land is blighted, but for the reason I have given section 39 does not apply."

The second case was that of *Peers Owen v. Bolton County Borough Council* (Ref/29/1960), which concerned a dwelling-house in Bolton, Lancashire. The only point at issue was again the meaning of one of the specified descriptions contained in section 39—this time (1) (b) which provides as follows :—

"(b) land allocated by a development plan for the purposes of any functions of a government department, local authority or statutory undertakers, or of the National Coal Board, or is land defined in such a plan as the site of proposed development for the purposes of any such functions."

The hereditament was included in an area allocated for residential purposes and programmed for development during the period from the sixth to the twentieth years from the approval of the plan. However, in the written statement, the particular locality in which this hereditament was situated came within one of ten "redevelopment areas" regarding which it was stated :—

"It is proposed to clear the following areas and to redevelop them for residential purposes in accordance with modern standards."

The statement was silent as to who would carry out the clearance or redevelopment. The area was not designated as subject to compulsory acquisition under section 5 of the 1947 Act.

For the claimant, it was contended that since the powers of the competent authority included the clearance and redevelopment of areas under part III of the Housing Act, 1957, and the acquisition and erection of houses under part V, the land was therefore allocated for the purpose of a function

of the competent authority. In addition the only practical way the area could be cleared and redeveloped would be by the acquisition of the area by the local authority; that this must be inferred from the written statement and that anyway this would be anticipated by any purchaser.

For the borough, it was argued that a redevelopment area for planning purposes was quite different from a redevelopment area under the Housing Act. Land could be cleared and redeveloped by private enterprise. If the mere fact that a local authority had power to acquire land and build houses meant that land allocated for residential purposes was land allocated for the purposes of a local authority, a claim could be made in respect of any such land, even if the land was undeveloped.

In their decision the Tribunal agreed that this was not the case. "... it is not, I think, sufficient that it should be allocated for a purpose which, although one in respect of

which the local authority has powers or duties, can and might well be exercised by anyone. The statute, I think, requires that it should be allocated directly for the purposes of a local authority."

However, the Tribunal considered it was relevant to consider the practical application of the procedure contemplated in the written statement and stated in their decision:—

"While it is, of course, true that clearance and redevelopment can be achieved by private enterprise, it is, I think, obvious that in practice an area containing a population of 6,393 persons could, and would, only be cleared and redeveloped so as to house 2,765 persons as required by the written statement by the exercise of their functions by a local authority."

Accordingly the Tribunal decided not to uphold the borough's objection and held the notice a valid notice.

## Rating Surveyor's Diary

### IN THE COURT OF APPEAL

#### JEWISH BLIND HOME NOT EXEMPT

*Jewish Blind Society v. Henning (VO)*

#### Meaning of "Structure"

The Court of Appeal (Lord Evershed, M.R., Pearce and Harman, L.J.J.) allowed this appeal by the valuation officer against a decision of the Lands Tribunal (Erskine Simes, Q.C.) that a home for the blind, "Rokefield," Dorking, was a hereditament which was a structure or structures falling within section 9 (1) of the Rating and Valuation (Miscellaneous Provisions) Act, 1955, and that the gross value should not exceed £20, the value of the land. Assessment of £1,250 gross value, £1,038 rateable value (as determined by Southern Surrey LVC) reinstated.

Lord Evershed, M.R., said that the argument for the appellant valuation officer before the Lands Tribunal was that the word "structure" which was used in the subsection meant something different from, something less extensive than, the entire hereditament which would or might be the subject-matter of rating. The Lands Tribunal rejected this argument, but his Lordship thought it a cogent one, and was prepared to hold that "Rokefield" was not a structure within the meaning of section 9 (1). The ratepayers were not an organisation "formed for the purposes mentioned in section 28 (1) of the National Health Service Act, 1946," and could not therefore be brought within paragraph (b) of section 9 (1); nor were they mentioned in section 30 of the National Assistance Act, 1948, as required by paragraph (c) of the subsection.

#### "Similar Kind" of Structure

There remained the one difficult question—even assuming the premises were a "structure"—as to whether the ratepayers could be brought within the broad terms of paragraph (d). On the whole, his Lordship thought that the phrase "a structure of a kind similar to" meant a structure the purposes or adaptability of which were similar to those previously mentioned. If this was the right view, then his conclusion was that the structure in question could not be said, within the meaning of the paragraph, to be similar to the structures indicated in paragraphs (b) or (c); and, if that was right, it was unnecessary to consider further the

precise significance of the final words in the paragraph "by reason that it is owned or has been supplied," etc. His Lordship concluded, therefore, that paragraph (d) could not be construed as covering the premises in question. The result was that the valuation officer's appeal ought to succeed.

Pearce, L.J. agreed. Section 7 of the 1955 Act contained a complete exemption of certain hereditaments from rates and section 8 provided a limitation of rates chargeable on certain hereditaments. Then section 9 (1) set out certain structures of which no account should be taken for the purpose of ascertaining the gross value of a hereditament for rating purposes. That section therefore seemed to anticipate that, even when no account was taken of such structures, there would still be left a hereditament capable of assessment.

The use of the words "structure that has been supplied" and the nature of the structure specifically referred to in paragraph (a) gave the impression that the structures contemplated were something of the nature of appendices to substantial buildings rather than the substantial buildings themselves. And the word "supply" gave an impression of prefabrication or impermanence.

But the words used seemed to indicate that the nature of the construction was some guide, and lent force to the argument of counsel for the valuation officer that the structures contemplated were in the nature of appendices to a building like the little sheds under paragraph (a) or structures like the workshops or hostels under paragraph (c), viz., structures aimed at service rather than permanent accommodation. His Lordship thought that the words "of a kind similar" must mean compendiously "of a kind similar in the nature of their construction and used for similar purposes."

Harman, L.J. also agreed, adding that no doubt it was true that every building was a structure, but it seemed monstrous to suggest that we should substitute the words "this is the structure that Jack supplied," for the words "this is the house that Jack built."

#### AGRICULTURAL DERATING

##### *Farmers Machinery Syndicate v. Shaw (VO)*

Their Lordships (Lord Evershed, M.R., Harman and Donovan, L.J.J.) also allowed this appeal by a valuation officer from a decision of the Lands Tribunal (Mr. Erskine Simes, Q.C.) on 11th January, 1960, and directed that the "Grain Drying Depot," Annett's Farm, Faringdon, should



be entered in the valuation list as not being an agricultural hereditament.

### Co-operatively Owned Buildings Not Entitled to Relief

Lord Justice Harman said that a syndicate of 14 farmers in Hampshire had acquired a grain drier, which had been installed on the land of one of the members for the use of all. The Lands Tribunal had found that the hereditament was "occupied together with agricultural land" and was "used solely in connection with agricultural operations thereon"; it was therefore held exempt from rating as an "agricultural hereditament" within section 2 (2) of the Rating and Valuation (Apportionment) Act, 1928.

The building however was used in connection with the 14 different pieces of land owned by each of the members of the syndicate which put the building outside section 2 (2); again, the rateable occupiers of the building were not the members but were the management committee appointed by them. That finding alone was fatal to this claim.

Lord Justice Donovan, concurring, said that even if the 14 farmers were the rateable occupiers of the building jointly and severally, the building would not be occupied solely in connection with any one of them but with all of them.

The Master of the Rolls, also concurring, said that it might well be that Parliament might think fit to revise the language of section 2 (2) to help co-operative farming, but unless that was done they could not get relief.

## LANDS TRIBUNAL DECISIONS

### VALUATION

#### Private Bus Garage

*Whittle & Son v. Hallett (VO)*

(28th April, 1960)

Garage and premises, High Street, Highley, assessed at £330 G.V., £272 R.V., reduced on appeal to £315 G.V., £259 R.V., by Shropshire LVC.

Rate payer's appeal allowed: assessment reduced to £280 G.V., £230 R.V.

Brick-built bus garage for vehicles owned and operated by the ratepayers, 108 feet long by 53 feet wide: a single span corrugated asbestos-cement roof with eighteen perspex roof lights in each slope: double sliding doors giving a total width of opening of 20 feet and a height in the clear of 14 feet. According to the evidence this height was insufficient to admit, with safety, a double-decker bus of the kind usually engaged in urban services. The covered garage included a two-storey stores enclosure about 12 feet square with external stairs and w.c. under the latter: a large inspection pit: no central or other heating was provided in the garage. The premises also included an enclosed but unroofed forecourt about 70 feet long by 52 feet wide with a 20 feet gated entrance. In the forecourt was a diesel-oil tank with brick supports. There was no other fixed equipment. The hereditament would conveniently take ten buses of the size used by the ratepayers and, although it was conceded that eleven or even twelve could be squeezed in, such a practice was undesirable and could lead to serious fire-risk as well as physical damage to the vehicles. The following valuation was put in for the ratepayers:—

Garage, 108 feet x 53 feet = 5,724 square feet @ 6d.	£	143
(containing small store and inspection pit)		
Supports for oil tank, forecourt	say	7
		<u>£150</u>

Capacity ten buses which shows £15 per bus.

The valuation officer put in the following valuation:—

Garage, 53 feet x 108 feet = 5,724 square feet @ 1s. 1d. ...	£	310 gross value
Forecourt approximately 400 square yards and supports for diesel-oil tank ...	say	15
Gross value ...		<u>£325</u>
Gross value as determined by local valuation court and accepted by the valuation officer ...		£315

The impression the Tribunal got from the evidence and from inspection was that whatever might be the appeal of the premises to the light industrialist, the demand from the public transport operator would be very limited.

It may be assumed, then, that excluding the light industrialist, the hypothetical landlord would recognise the narrowness of his market and could only rely on such chances of improvement as could be expected in the future. The Tribunal did not think the light industrialist would be a serious competitor.

### Old House Used as Offices

*Hossack v. Harrison (VO)*

(11th January, 1960)

Offices, ground floor and first floor, 126, Nantwich Road, Crewe, assessed at £120 G.V., £97 N.A.V., under a decision of the Cheshire West LVC.

Ratepayer's appeal allowed: assessment reduced to £110 G.V., £88 N.A.V.

Formerly a private dwelling-house, constructed about eighty to ninety years ago, no structural alterations were made to convert the building from a poor type of old-fashioned dwelling-house into offices: it was merely the class of the occupation which has changed.

The accommodation is summarised in the valuation officer's valuation, which was as follows:—

#### Valuation of Offices, Ground and First Floor 126 Nantwich Road, Crewe

	Area (square feet)	Price	Gross Value	Gross Value	Note by Tribunal Valuation Officer's overall price
Ground Floor:		s. d.	£ s.	£ s.	s. d.
Hall ...					
General office ...	180	3 6	31 10		
Principal's office ...	164	2 6	20 10		3 0
Store-filing room ...	112	2 0	11 4		
Scullery ...	86	1 6	6 9		1 6
	542		£69 13	69 13	
First Floor:					
Office ...	167	2 6	20 17		
Office ...	85	2 3	9 11		2 3
Office ...	126	2 0	12 12		
Bathroom & w.c. ...	—	—	—		
Store ...	84	1 3	5 5		1 3
	462		£48 5	48 5	
Outbuildings:					
Conservatory ...	96	say	£2		
W.c. ...	31		—		
Coals ...	28		—	2 0	
				<u>£119 18</u>	

Say: £120 gross value, £97 net annual value, £78 rateable value.



The Tribunal agreed with the valuation officer that the general condition of the building was fair for its age. Some parts of it were in need of redecoration; but in rating law the landlord is deemed responsible for all repairs; therefore the present state of decorative repair of the building, both inside and outside, must be ignored. There were, however, certain structural drawbacks and disadvantages, not uncommon when an unconverted dwelling-house is occupied as offices, which must be taken into account.

Having inspected the appeal hereditament in detail and all the other properties to which attention was drawn, the Tribunal was left with the clear impression that No. 126, in its present structural state, afforded poorer office accommodation than most of the comparables. The Tribunal came to the conclusion the valuation officer had overvalued the less important rooms used as offices and also the obsolete domestic quarters which were considered a hindrance rather than an asset to the hereditament as a whole when viewed as offices.

#### Small Caravan Site

*Brown v. Evans (VO).*

(30th June, 1960)

Caravan site at Hayling Island, assessed at £8 rateable value; increased consequent upon V.O.'s proposal to £24 R.V. by the Portsmouth Area LVC. Ratepayer's appeal dismissed.

The site in question fronted to a rough unmade road, was fenced on all sides, was level and well kept. There were two caravans and a small wooden shed on the "double" site.

The valuation officer said there was no direct rental evidence: he valued sites in this district on the basis of £12 per caravan and had checked this by an analysis of the rent which the ratepayer had agreed to be a reasonable average rent. Two caravan sites at £30 each gave £60, allowing £14 for water rate, repairs to fences and gates, insurance and other expenses left £46 which, less rates at 18s. 4d. gave £24 rateable value. He conceded that a basis of £12 per caravan actually in occupation produced, on occasion, a situation where a smaller site had a larger assessment than one with a greater area; and replying to a question from the tribunal said that not all the sites were licensed for caravans.

Whilst the ratepayer said he could not find a yardstick he had agreed that a site rent of £30 per annum was generally applicable and had thereby created the yardstick. The Tribunal thought that the deduction of £14 for the two sites made by the valuation officer was, if anything, generous and so the agreed rent of £30 per site supported the assessment of £24 rateable value, and the appeal must be dismissed. This decision should not be construed as approving the method of valuation, i.e., a value per caravan on a site. The Tribunal was surprised that some sites were not licensed particularly as to the number of caravans to be accommodated and thought that in a case like this when the sites were clearly defined it should be possible for regard to be had to other considerations than the actual number of caravans which the owner may have on his site at a particular time.

#### Holiday Centre Run at a Loss

*Pritchett-Brown (VO) v. The Workers Travel Association Ltd.*

(28th April, 1960)

Dunraven Castle guest house.

Gross value £400 (reduced from £900 by Mid-Glamorgan LVC) confirmed.

V.O.'s appeal dismissed.

The respondent ratepayers were a non-profit-making association who took a lease of the hereditament for 21 years from October, 1946, at rents of £400 for the first three years, £450 for the fourth year and £500 for every subsequent year. The lessees accepted what was virtually a full repairing covenant: of the castle, the park wall, most of the fences, there were also some provisions relating to the installation of mains electricity to which the landlord covenanted to make a contribution not exceeding £900.

The lessees' liabilities for repair taken in conjunction with the reserved rents would have given a distorted picture of statutory gross value and the appellant V.O. conceded that the rents reserved had been ignored by him. He put in a valuation based on a price per foot super. of main accommodation (bedrooms on hall floor at 1s. and 1s. 4d. and on mezzanine and first floors at 9d.) and spot figures for the ancillaries, which supported his figure of £750 gross value.

The following valuation was put in for the respondents on the receipts and expenditure method, based on the accounts for the year ended 31st October, 1956:—

Dunraven Castle had many disadvantages:

1. It was not in a tourist area. Public transport, shops and licensed houses were too far away and the property itself while scenically attractive had few other amenities required by visitors.

2. The beach involved a steep climb and was not easily accessible to old people and infants.

3. Service of meals involved too much labour and difficulty. The bedrooms were too large and multiple occupation was disliked by older people and even if acceptable to younger ones involved a reduction in terms.

4. The preservation of a reasonable standard of internal repair could only be secured by an endless struggle against external deterioration.

5. Motor coaches had great difficulty in reaching the premises and several operators and their drivers had refused to use the long drive which was their only available access.

The present charges were inadequate but they could not have been increased without raising the standard of accommodation and increasing the staff. Since 1947 this holiday centre had been consistently run at a loss and special recourse to accepting conferences and organised parties had proved unsuccessful. The Association had made a bad bargain in accepting the lease in 1946 and discussions with the landlord had resulted in an oral agreement that the Association should terminate its lease in 1960.

An assistant to the agents for the estate said that attempts had been made to find another tenant, but none was interested.

The Tribunal inspected the subject property and all the comparable hereditaments and having regard to what was seen and heard, had no hesitation in saying that the local valuation court had come to a correct decision.

#### DWELLING-HOUSES

##### Disrepair Decorative, not Structural

*Fields v. Thomas (VO).*

(14th July, 1960)

House and premises at Choetham, Manchester. Assessment of £34 G.V., £25 R.V., confirmed by South-East Lancashire LVC.

Ratepayer's appeal dismissed: no order as to costs. The valuation officer satisfied the Tribunal that the assessment was not excessive having regard to the rental evidence.

of similar houses in the locality. Most of the 1939 rents were low controlled rents, which did not reflect free market value: he therefore valued them on a slightly higher basis, but not as high as the level of the few decontrolled rents.

What the Tribunal had to decide was whether the condition of repair was so bad that no landlord could reasonably have been expected to put the house into proper order and keep it so. Its inspection confirmed the impression that it was generally in poor order. But it could find no structural disrepair, nor anything which could not be remedied, albeit at some expense. Assuming the house to be in good order, and maintained in good order by the hypothetical landlord, the Tribunal found that its rental value on the statutory terms was not less than the amount at which it was assessed. It was no reflection on the valuation officer that it made no order as to costs.

#### What the eye doesn't see . . .

*Gorman v. Gilmore (VO)*

(3rd August, 1960)

House at Hove.

Assessment of £115 gross value (Brighton and East Sussex (Western) LVC) reduced to £102.

Ratepayer's appeal allowed, but no costs awarded.

The Tribunal's inspection confirmed the ratepayer's submission as to the bad condition of the property. Bearing in mind the decision in *Wexler v. Playle (VO)* the Tribunal was forced to the conclusion that in this case the disrepair was such as not to be readily remediable, and was convinced that a potential landlord would have let it at a reduced rental rather than incur the cost of a full repair: there was no doubt that the V.O. would have come to a similar conclusion had he been permitted to inspect.

If the ratepayer had permitted the V.O. to inspect the inside of her house the appeal need never have been brought. In these circumstances the Tribunal did not allow her any costs.

#### Third Time Lucky

*Hemingway v. Pulsford (VO)*

(3rd October, 1960)

House at Minehead, Somerset.

Gross value in 1956 List, (house) £48: two earlier appeals to Lands Tribunal (1844/1957 and 151/1959) both dismissed and gross value of £48 confirmed.

VO's proposal, February, 1959, to increase assessment to £52 (house and garage) confirmed by West Somerset LVC.

Ratepayer's appeal partly succeeds: gross value reduced £49.

The appeal posed three questions: (1) Whether the small piece of additional back garden was worth £2 gross value; (2) whether the "garage" was rateable in law to the executors, and if so whether it was worth £2 gross value; and (3), whether there was a duplication of valuation by the respondent when contending for a total addition of £4 gross value.

The Tribunal came to the conclusion that there was a duplication in that the V.O. claimed the additional land was worth £2, *inter alia*, because it "included the right to put a garage there." If, in addition, the V.O. valued the so-called "garage" at £2, he was not being consistent with other garages, and the sites of other garages, in the locality. In answer to the tribunal the V.O. said he ascribed the following

basic gross values to normal-sized (15 feet by 9 feet) garages in his valuation area:—

Brick and tiled	... ..	£4 to £5
Prefabricated	... ..	£2 to £3
Smaller sized	... ..	£2

But the Tribunal was unable to agree that, by comparison with the other garages, it was worth £2 gross value upon it: by comparison with the other garages it assessed its value at no more than £1 gross.

On the evidence and in the light of its view, the Tribunal also came to the conclusion that the hypothetical tenant would not be prepared to pay any additional rent for the small piece of extra back garden.

#### Restricted Market not Warranting Lower Assessment Level

*Glyn Thomas v. Terrell (VO)*

(24th October, 1960)

School House at Maerdy, Denbighshire.

Assessment of £24 gross value (as confirmed by Denbighshire LVC) confirmed.

Ratepayer's appeal dismissed.

The house, though having a separate entrance, was attached to the school building. The occupation of the house by the appellant, who was the headmaster of the school, was a condition of his employment though he conceded that at the date of the proposal the local education authority did permit headmasters to live within a mile of their schools.

The houses in Maerdy were said to be assessed at figures which give a consistent 4d. per foot super. for gross value and this same figure had been applied to the school house. The Tribunal thought that the appellant over-emphasised the disadvantages of the house: the real question was the proximity to the school; for a schoolmaster this had advantages as well as disadvantages. Although the Tribunal would concede that this proximity might restrict the number of possible other tenants, it did not think that it warranted an assessment at a level lower than that of the other houses in Maerdy.

#### Current Values and User Contrasted with Pre-War

*Slepeski v. Etheridge (VO)*

(3rd November, 1960)

Apartment House in Wolverhampton.

Gross value of £145 (reduced from £155 by Stafford South LVC) confirmed.

Ratepayer's appeal dismissed.

*Harper v. Etheridge (VO)*

(3rd November, 1960)

Lodging House and Premises in Wolverhampton.

Gross value of £30 (reduced from £50 by Stafford South LVC) confirmed.

Ratepayer's appeal dismissed.

In both these cases the appeal properties fell to be assessed under section 68 of the 1925 Act, at a rental value applicable at the date of proposal, whereas the neighbouring private dwellings were assessed under section 2 of the 1953 Act, on pre-war rental values.

In the first case, Mr. A. L. Etheridge (Professional Associate) submitted details of the assessments of the four houses in the terrace revealing the following figures:—

No. 233 gross value	£50	rateable value	£400	
No. 235 gross value	£150 N.A.V.	£122	rateable value	£98
No. 237 gross value	£145 N.A.V.	£117	rateable value	£94
No. 239 gross value	£55	rateable value	£44	

The Tribunal had to consider the property as available to

let from year to year as an apartment house : the absence of rental evidence obviated direct comparisons ; but a prospective tenant might consider that if the adjoining private dwellings were accepted as worth £50 a year in June, 1939, similar property exploited as an apartment house in 1959 would be worth £145 a year, less than £3 a week.

In the second case, the VO submitted a schedule which indicated that the gross values of adjoining cottages were £19

and having regard to the differences between 1939 and 1959 values and the user, he valued the subject property at gross value £38 a year, but he had accepted the local valuation court's decision of £30.

Having regard to the dates at which the rental values of the properties had to be assessed and the difference of user, a 50 per cent. increase over the assessment of the neighbouring cottage seemed fair and reasonable.

## Valuations for Rating Purposes, April, 1960

The following figures, relating to rating and valuation in England and Wales, were given by the Minister of Housing and Local Government in a written answer on 29th November, 1960. The figures are provisional and correspond to the totals set out in the last line of Table C in Appendix VIII of the Report of the Ministry of Housing and Local Government, 1959 (Cmd. 1027).

Number of separately rated hereditaments ...	16,107,694
£	
Property occupied by or on behalf of the Crown (value on which contributions in lieu of rates are paid) ...	30,872,859
Industrial hereditaments :	
Net annual value of the hereditaments ...	151,997,618
Rateable value apportioned to industrial purposes ...	73,967,696
Rateable value apportioned to non-industrial purposes ...	4,003,303
Freight-transport hereditaments :	
Net annual value of the hereditaments ...	4,886,213
Rateable value apportioned to transport purposes* ...	1,880,527
Rateable value apportioned to non-transport purposes ...	550,739
Hereditaments (other than industrial and freight-transport hereditaments) where net annual value is subject to abatement under the Rating and Valuation Act, 1925, or local Acts :	
Net annual value ...	1,372,587
Rateable value ...	953,417
Other hereditaments :	
(a) where net annual value is subject to abatement under section 1 of the Rating and Valuation Act, 1957 :	
Net annual value ...	251,189,005
Rateable value ...	202,435,324
(b) where net annual value is not subject to abatement :	
Rateable value ...	387,708,990
Total rateable value ...	702,372,855

\* The figure takes into account abatements (amounting to £571,200) from net annual value by virtue of section 22 (1) (c) of, and Part II of the Second Schedule to, the Rating and Valuation Act, 1925.

### PERCENTAGES OF TOTAL RATEABLE VALUE AND TOTAL RATE PRODUCT, ENGLAND AND WALES

Class of Property	1959-60		1960-61	
	Rateable Values*	Percentage of amount† expected to be received in rates (3)	Rateable Values*	Percentage of amount† expected to be received in rates (5)
(1)	(2)	(3)	(4)	(5)
	Per cent.	Per cent.	Per cent.	Per cent.
Industrial and freight-transport ...	11.59	11.54	11.45	11.40
Benefitting from abatement under section 1 of the Rating and Valuation Act, 1957	28.46	28.34	28.82	28.70
Dwellings ...	47.62	47.43	47.54	47.35
Crown ...	4.44	4.42	4.39	4.37
Other rateable property ...	7.89	7.86	7.80	7.77
Railways and canals ...	—	0.41	—	0.41
	100.00	100.00	100.00	100.00

\* Including values entered in the valuation lists as representing the rateable values of hereditaments occupied by or on behalf of the Crown, being the values upon which contributions in aid of rates are computed.

† The estimated amounts to be received in rates for 1959-60 (£648,000,000) and for 1960-61 (£675,000,000) include the British Transport Commission's contributions in lieu of rates in respect of railway and canal hereditaments of £2,654,813 for 1959-60 and £2,734,881 for 1960-61. No statistics are available to show the amount of rates collected in respect of different classes of hereditament. The percentage in columns (3) and (5) are calculated on the assumption that, apart from the British Transport Commission's contributions, the amounts will have been charged on the respective classes of property in column (1) in proportion to the percentages in columns (2) and (4).

## Housing Publications

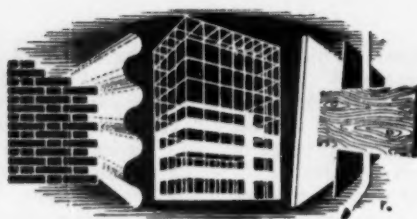
HOUSING AND TOWN AND COUNTRY PLANNING IN THE U.K. DEPENDENCIES. Central Office of Information Reference Pamphlet, 39. (H.M.S.O., 3s. 6d.)

Occasional papers on Social Administration : No. 1.—

HOUSING POLICY SINCE THE WAR, by D. V. Donnison. (Price 5s.)

PUBLIC CLEANSING : REFUSE COLLECTION AND DISPOSAL : STREET CLEANSING : COSTING RETURNS, 1958-59. Ministry of Housing. (H.M.S.O., 5s. 6d.)





## BUILDING AND QUANTITY SURVEYING

### *Report of the Work of the Cost Research Panel 1956-1960*

*The following report, which was presented to the Council on 14th November, 1960, outlines the work of the Cost Research Panel since its formation in April, 1956, and indicates the trend of its future activities.*

#### BACKGROUND TO COST RESEARCH

1. Chartered surveyors concerned with the management and development of land and the buildings upon it, are necessarily concerned with matters of cost. Different aspects of cost require to be examined by surveyors practising in the various sections of the profession, but a detailed knowledge of cost, whether of land or buildings, is of fundamental interest to all.

2. Since 1945 there has been an extension of the use of cost information in most sections of the national economy. Costing which is concerned solely with the correct accounting for expenditure, is no longer considered adequate. Costing plays a positive part in forming decisions, and is the medium through which the economics of any enterprise are assessed or controlled. This is achieved by the evaluation not only of total costs but also of the cost of each step in the planning and execution of a project.

3. This development has been especially marked in the field of building costs. Rising prices, restriction of the use of capital and high interest rates have caused building owners to demand that their consultants should accept cost as an element in design and that they should provide a balanced cost in all parts of the building, as well as an accurately forecast overall cost.

4. Chartered surveyors have long been accustomed to provide cost information to their clients. The increased awareness of costs in the building industry, however, revealed the need for surveyors to improve their knowledge and techniques, and for the profession, as a whole, to conduct expert research into general problems beyond the resources of individual practitioners.

5. In September, 1955, the Quantity Surveyors Committee appointed a small steering committee to study the question of cost investigation. As a result of its report, the Quantity Surveyors Committee recommended that the Council should appoint a Panel to carry out research into the broad problems of building costs, and to stimulate the interest of members in such matters. They felt it was vital for the Institution to give a lead in cost research, to act as the focal point in the mind of the community for building

cost information, which, in turn, would extend the field of influence of the chartered surveyor into the broader aspects of building economics.

#### ORGANISATION OF THE PANEL

6. The Panel was formed in May, 1956, under the Chairmanship of Mr. Cyril Sweett, with an initial membership of two quantity surveyors, Messrs. J. W. Cloux and C. Morgan Silk, and one building surveyor, Mr. C. H. Walker, C.B.E., M.C. Over the past four years the membership has been increased to 16. The present constitution of the Panel is described at the end of this report. On his election as Chairman of the Quantity Surveyors Committee, in June, 1960, Mr. Cyril Sweett retired from the Chair of the Panel and was succeeded by Mr. E. R. Parrinder.

7. Because of the close association between the work of the Panel and of the Quantity Surveyors Committee, the Officers of the Committee have been regarded as members of the Panel *ex officio*. It should be stressed, however, that the Panel was appointed by the Council as an independent body responsible to them. As a matter of convenience the Panel reports and is administered through the Quantity Surveyors Committee.

8. The terms of reference of the Panel are as follows:—

(i) to keep under review the sources of cost information available to the industry, and to consider the desirability of creating a focal point for the collection of information;

(ii) to initiate research into matters affecting the cost of building, including the effect of standardisation and repetition in design;

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has been appointed by both Chairmen of the Panel as a temporary member of their staffs, but assigned full-time to the Panel's duties.

#### INVESTIGATION INTO COSTS OF FLATS AND HOUSES

10. In March, 1956, the Minister of Housing and Local Government invited the comments of the Institution on the reasons why flats cost more to build than houses, and asked for suggestions as to how the costs of building flats might be reduced.

11. The Panel approached the problem posed by the Minister in two ways. First, they examined the technical aspects of design which bear upon the cost of flats; secondly, they considered the professional and administrative approach to housing development, examining the way decisions which affect costs are taken.

12. To investigate the relationship between housing design and housing costs, contract documents and priced bills of quantities for more than 50 housing schemes, which incorporated over 150 designs of housing blocks, were analysed in detail. Information was provided by local authorities and quantity surveyors in private practice.

13. To obtain evidence on the approach to housing projects, the Panel issued, early in 1957, a questionnaire to local authorities, architects, quantity surveyors and builders. 153 replies were received and summarised.

14. The essential points arising from this research were incorporated into the Panel's Report to the Minister, which was submitted to Council through the Quantity Surveyors Committee, on 2nd June, 1958. It was welcomed by the Minister and widely reported in the technical and national press. The Panel recommended that "cost should be a planned factor, and should be closely watched from the inception of a scheme to its completion."

15. All the information collected by the Panel has been or will be published in background papers to the Report. Papers were prepared describing procedure as reflected in replies to the questionnaire, and on ideal procedure for cost planning multi-storey housing schemes. The cost analyses of housing schemes have been used for the preparation of case studies on the design and cost of two-storey housing, low flats and high flats. In addition, as a tool of research, the Panel prepared new indices of building costs by trades for housing covering the years 1950 to date.

16. More than 1,200 copies of the Report, and a further 4,000 copies of the supporting papers have been issued by the Institution. The papers prepared or sponsored by the Panel are listed at the end of this report.

17. In 1957, as part of their research into housing costs, the Panel prepared an exhibit on cost analysis and cost planning which was displayed at the Institution's first Annual Conference at Nottingham and at the London County Council Brixton School of Building.

#### RECENT WORK OF THE PANEL

18. Having completed its work on the problem posed by the Minister, the Panel turned to the second stage of its programme, of which the main point has been the spread of interest in cost planning. In June, 1959, the Panel formed two Working Parties from its own membership. These reflect the two lines along which research has proceeded; research into design-cost relationships, and research into techniques.

19. The first Working Party, on Design-Cost Research, was given the task of stimulating cost research in the Quantity

Surveyors Sections of the Branches. The Panel had issued in April, 1959, an invitation to all Branches to participate in cost research. Specific aspects of design and cost were allocated to the Branches. The Lancashire, Cheshire and Isle of Man Branch had already completed a study of roof costs, and their approach was taken as the model for other Branches. A meeting of Branch representatives was held at the Institution in June, 1960. At present, 16 Branches, including the Junior Organisation Quantity Surveyors Committee, are participating in this programme. The important point to this research is not so much the results produced, although they are valuable, but the insight into the problems of costing gained by the individuals undertaking research.

20. The Design-Cost Research Working Party is also continuing the Panel's studies into building costs. Current work includes a study of reports on housing densities and costs, the preparation of indices of building costs by trades for steel-framed and concrete-framed office blocks, liaison with the Ministry of Health in connection with their research into their building programme, and advice to different organisations engaged in building cost research.

21. The second Working Party on quantity surveying techniques, is studying the systems and operation for which the bill of quantities may be used. Uses by clients, architects, quantity surveyors and builders are being considered, and to collect evidence, a questionnaire has been circulated. An historical survey of the growth of the bill has been completed, and present and potential uses of the bill are now being examined.

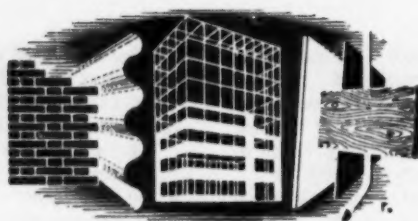
22. A third Working Party was established in March, 1960, to study costs of agricultural buildings. Work is still at a very early stage, but it is hoped eventually to make a useful contribution in consultation with the Agriculture and Forestry Committee of the Council.

#### POST QUALIFICATION COURSES IN COST RESEARCH AND COST PLANNING

23. The courses in cost planning sponsored by the Panel deserve special mention. To spread knowledge of cost planning techniques, the Panel has sponsored three post-qualification courses in cost research and cost planning, designed for principals and senior assistants. The L.C.C. Brixton School of Building is responsible for the administrative organisation of the courses which are held in the College Suite of the Trades Union Congress Memorial Building. Courses have so far been held in November, 1959, and May and November, 1960. This last was planned for members from the provinces in the hope that they would themselves organise regional courses.

24. To ensure that members obtain greatest value from these courses, numbers are restricted to 30. It is a measure of the success of these courses and the growing interest of the profession in cost planning, that 130 applications were received for places on the second course. Papers given at these courses have been edited and published in book form. Copies were distributed to all those who took part in the three courses held so far, and in addition 270 other copies were sold, both to members and to people outside the profession.

25. Discussions have also taken place with the College of Estate Management on a proposal that a correspondence course in cost planning should be provided by the College for members at the post-qualification stage.



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12. To investigate the relationship between housing design and housing costs, contract documents and priced bills of quantities for more than 50 housing schemes, which incorporated over 150 designs of housing blocks, were analysed in detail. Information was provided by local authorities and quantity surveyors in private practice.

13. To obtain evidence on the approach to housing projects, the Panel issued, early in 1957, a questionnaire to local authorities, architects, quantity surveyors and builders. 153 replies were received and summarised.

14. The essential points arising from this research were incorporated into the Panel's Report to the Minister, which was submitted to Council through the Quantity Surveyors Committee, on 2nd June, 1958. It was welcomed by the Minister and widely reported in the technical and national press. The Panel recommend that "cost should be a planned factor, and should be closely watched from the inception of a scheme to its completion."

15. All the information collected by the Panel has been or will be published in background papers to the Report. Papers were prepared describing procedure as reflected in replies to the questionnaire, and on ideal procedure for cost planning multi-storey housing schemes. The cost analyses of housing schemes have been used for the preparation of case studies on the design and cost of two-storey housing, low flats and high flats. In addition, as a tool of research, the Panel prepared new indices of building costs by trades for housing covering the years 1950 to date.

16. More than 1,200 copies of the Report, and a further 4,000 copies of the supporting papers have been issued by the Institution. The papers prepared or sponsored by the Panel are listed at the end of this report.

17. In 1957, as part of their research into housing costs, the Panel prepared an exhibit on cost analysis and cost planning which was displayed at the Institution's first Annual Conference at Nottingham and at the London County Council Brixton School of Building.

#### RECENT WORK OF THE PANEL

18. Having completed its work on the problem posed by the Minister, the Panel turned to the second stage of its programme, of which the main point has been the spread of interest in cost planning. In June, 1959, the Panel formed two Working Parties from its own membership. These reflect the two lines along which research has proceeded; research into design-cost relationships, and research into techniques.

19. The first Working Party, on Design-Cost Research, was given the task of stimulating cost research in the Quantity

Surveyors Sections of the Branches. The Panel had issued in April, 1959, an invitation to all Branches to participate in cost research. Specific aspects of design and cost were allocated to the Branches. The Lancashire, Cheshire and Isle of Man Branch had already completed a study of roof costs, and their approach was taken as the model for other Branches. A meeting of Branch representatives was held at the Institution in June, 1960. At present, 16 Branches, including the Junior Organisation Quantity Surveyors Committee, are participating in this programme. The important point to this research is not so much the results produced, although they are valuable, but the insight into the problems of costing gained by the individuals undertaking research.

20. The Design-Cost Research Working Party is also continuing the Panel's studies into building costs. Current work includes a study of reports on housing densities and costs, the preparation of indices of building costs by trades for steel-framed and concrete-framed office blocks, liaison with the Ministry of Health in connection with their research into their building programme, and advice to different organisations engaged in building cost research.

21. The second Working Party on quantity surveying techniques, is studying the systems and operation for which the bill of quantities may be used. Uses by clients, architects, quantity surveyors and builders are being considered, and to collect evidence, a questionnaire has been circulated. An historical survey of the growth of the bill has been completed, and present and potential uses of the bill are now being examined.

22. A third Working Party was established in March, 1960, to study costs of agricultural buildings. Work is still at a very early stage, but it is hoped eventually to make a useful contribution in consultation with the Agriculture and Forestry Committee of the Council.

#### POST QUALIFICATION COURSES IN COST RESEARCH AND COST PLANNING

23. The courses in cost planning sponsored by the Panel deserve special mention. To spread knowledge of cost planning techniques, the Panel has sponsored three post-qualification courses in cost research and cost planning, designed for principals and senior assistants. The L.C.C. Brixton School of Building is responsible for the administrative organisation of the courses which are held in the College Suite of the Trades Union Congress Memorial Building. Courses have so far been held in November, 1959, and May and November, 1960. This last was planned for members from the provinces in the hope that they would themselves organise regional courses.

24. To ensure that members obtain greatest value from these courses, numbers are restricted to 30. It is a measure of the success of these courses and the growing interest of the profession in cost planning, that 130 applications were received for places on the second course. Papers given at these courses have been edited and published in book form. Copies were distributed to all those who took part in the three courses held so far, and in addition 270 other copies were sold, both to members and to people outside the profession.

25. Discussions have also taken place with the College of Estate Management on a proposal that a correspondence course in cost planning should be provided by the College for members at the post-qualification stage.



## LIAISON WITH OTHER BODIES

26. From its earliest days, the Panel has endeavoured to establish a comprehensive network of liaison with different bodies interested in building costs. Of particular interest is the liaison established by the Panel with members overseas. There is great interest in cost planning among members in the Union of South Africa, and a liaison member for cost research (Mr. O. C. Venn (Fellow), M.C.Q.S.) has been appointed. Members in Australia have also shown their interest, and here again a liaison officer for cost research, Mr. A. P. Carpenter (Professional Associate), has been appointed.

27. Formal liaison with the Royal Institute of British Architects was established in the Spring of 1959 with the formation of a Cost Research Liaison Committee. The terms of reference of the Liaison Committee are:—

- (i) to stimulate research into the cost of building including joint research by architects and quantity surveyors;
- (ii) to consider and advise upon the co-ordination of the activities of each body in the field of building economics; and
- (iii) to facilitate the flow of information and ideas in this field.

This Committee has met somewhat infrequently, especially since the disbanding of the R.I.B.A. Cost Research Committee and the merging of its responsibilities with the R.I.B.A. Management Committee.

In addition, liaison has been established with many other professional institutions and trade and research associations, as well as the contacts which are maintained with Government departments and both the national and the technical press.

28. The Panel has also established liaison with bodies in the United States, Canada, Belgium, France, Denmark and Israel, and with the Economic Commission for Europe of the United Nations Organisation.

## PUBLIC RELATIONS

29. Although the main intent of the research is to increase the profession's store of knowledge, the Panel's work and the public commendation it has frequently received, have performed a valuable service in the field of public relations by enhancing the public image of the Institution. Many of the Panel's papers have been reprinted in the technical press and its work commended in leading articles. Important sections of the national press have also reported on the Panel's findings. In addition, members of the Panel have

been invited to take part in conferences organised by outside bodies such as the Housing Centre Trust and the Yerbury Foundation to discuss cost research. All these help to enhance the prestige of the Institution.

## FUTURE WORK

30. The ultimate aim of the Panel is to increase the efficiency of the chartered surveyor concerned with building costs. It should ensure that the most up-to-date methods of producing speedy and accurate information on building costs are known to, and used by, all members. Although it is too early to advise the Council precisely on the ultimate form of the Panel's work, the next stage should clearly concern action under item (i) of the Panel's terms of reference, namely, the consideration of the creation of a focal point for the collection of cost information. Much preliminary work has been completed, particularly on the financial feasibility of creating a cost information service, and on the form which it should take. The Panel's work should not overlap the information services now being considered by the Internal Services Committee of the Council. There are, however, special problems in the collection and collation of building cost information which set this matter apart from the supply of other professional data.

## PRESENT CONSTITUTION OF THE COST RESEARCH PANEL

The members of the Panel are:—

Messrs. E. R. Parrinder (Fellow), Chairman; Cyril Sweett (Fellow), Immediate Past Chairman; Frank Hyams (Fellow); Peter Johnson (Fellow); James Nisbet (Fellow); D. W. Nunn, O.B.E. (Professional Associate); W. J. Reiners, B.Sc.; C. M. Silk (Fellow); M. H. Thackray (Fellow); C. A. Wales (Fellow); C. H. Walker, C.B.E., M.C. (Fellow); L. McLeod Watson, M.A. (Fellow); Research Officer, F. M. J. Lee, B.Sc. (ECON.); Officers of the Quantity Surveyors Committee are *ex officio* members of the Panel.

There is, in addition, a liaison member from the R.I.B.A., Mr. R. Baden Hellard, DIP. ARCH., A.R.I.B.A.

The above members serve on one of the three Working Parties, with the addition of the following who serve on a Working Party only:—

Messrs. H. L. Ager (Professional Associate); P. E. Bathurst (Professional Associate); W. D. Bristow (Fellow); R. W. Gleed, M.A. (Fellow); F. S. Johnstone (Professional Associate); C. M. Nott (Fellow); N. R. Wheatley (Professional Associate).

Former members of the Panel are: Messrs. J. W. Cloux (Professional Associate) and E. Norman Harris, A.F.C. (Fellow).

## Cost Research Panel Papers

(i) *Papers Compiled by the Panel, which form the background to their Report to the Minister of Housing and Local Government on the Cost of Flats and Houses in England and Wales (June, 1958), and which have been published in The Chartered Surveyor.*

1. "Questionnaire on Building Costs"	February, 1958	4. "Planning the Cost—The Economic Control of Building Development"	May, 1958
2. "Factors Affecting Relative Costs of Multi-storey Housing"	March, 1958	5. "The Cost and Design of Two-storey Housing"	April, 1959
3. "Indices of Building Costs by Trades—Multi-storey and Traditional Housing"	April, 1958	6. "The Cost and Design of Low Flats"	June, 1960
		7. "The Cost and Design of High Flats"	In preparation

(ii) *Papers written by or at the invitation of the Cost Research Panel and published in The Chartered Surveyor*

1. "Multi-storey Flat Design; Factors Affecting Economy in Construction Costs." C. Morgan Silk (Fellow)	November, 1956	3. "A Perspective of the Building Industry." F. M. Lee, B.Sc. (ECON.)	March, 1957
2. "Structural Economics of High Flats; the Case for Cross-wall Construction." Peter Dunican, A.M.I.STRUCT.E.	February, 1957	4. "Cost Analysis." Cost Research Panel	May, 1957
		5. "Report on an Exhibit of Cost Analysis and Cost Planning." F. M. Lee, B.Sc. (ECON.)	June, 1957

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| 6. "Cost Research." Cyril Sweett (Fellow)   | August, 1957    | 19. "The Role of the Quantity Surveyor during the Design Stage." James Nisbet (Fellow)  | July, 1959      |
| 7. "Notes on Building Cost Research." W. J. Reiners, B.Sc.  | September, 1957 | 20. "The Development of Cost Planning during the Design Stage." C. M. Nott (Professional Associate)   | February, 1960  |
| 8. "Cost Research and the Quantity Surveyor." C. Morgan Silk (Fellow)                                   | September, 1957 | 21. "Cost Comparison of Alternative Roofs suitable for Local Authority Type Flats." Lancashire, Cheshire and I.O.M. Branch Cost Research Panel. | March, 1960     |
| 9. "The Quest for Building Design—Cost Data." W. James (Fellow)   | November, 1957  | 22. "The Approach to Branch Cost Research." Cost Research Panel   | April, 1960     |
| 10. "High Flats in Structural Brickwork." Peter Dunican, A.M.I.STRUCT.E.                                | December, 1957  | 23. "An Example of Cost Planning." P. W. Grafton (Fellow)   | April, 1960     |
| 11. "Work Study of Maintenance Cost." Imperial Chemical Industries.                                     |                 | 24. "Structural Steelwork and Reinforced Concrete for Framed Buildings—Some Notes on Comparative Economics." Peter Dunican, A.M.I.STRUCT.E.     | August, 1960    |
| 12. "Research Study in the Cost of Housing in New York"   | October, 1958   | 25. "Net Density, Cost and Value in Public Authority Dwellings." Nathaniel Lichfield, B.Sc., Ph.D. (Fellow), M.T.P.L., A.M.I.MUN.E.             | September, 1960 |
| 13. "Management and Management Training in Building and Civil Engineering"                              | September, 1958 | 26. "Quantity Surveying in Cumbernauld New Town." Jack A. Denton (Professional Associate)   | October, 1960   |
| 14. "Job Planning and Cost Control in Building and Civil Engineering"                                   | October, 1958   | 27. "Indices of Building Costs by Trades: Office Building." Cost Research Panel   | In preparation  |
| 15. "Research and Development in Building and Civil Engineering"  | November, 1958  | 28. "Floor Covering Costs." Hampshire Branch Cost Research Panel  | In preparation  |
| 16. "Work Study in the Building Industry"   | December, 1958  | 29. "The Evolution of the Bill." F. M. Lee, B.Sc.(ECON.)  | In preparation  |
| 17. "Cost Research"   | May, 1959       |   |                 |
| 18. "Cost Analysis—Its Application to Cost Planning and Cost Control Techniques." Cyril Sweett (Fellow) | June, 1959      |   |                 |

## (iii) Papers written by Members of the Panel and published elsewhere.

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|---|-----------------------------------|--|
| 1. "Housing Costs." Cyril Sweett (Fellow)   | "Housing Review." August, 1958    | 4. "Cost Planning: Report on a post-graduate course on Cost Planning." Edited by Robert F. Lane (Fellow) and F. M. Lee, B.Sc.(ECON.). Cost Research Panel. |
| 2. "Cost Guidance for Housing Design." F. M. Lee and C. Sweett. Appendix B. Report on Government Action to Reduce Housing Costs. European Economic Commission. United Nations | H.M.S.O. 1959                     | 5. "The Effect of Shape on Building Costs and Methods." M. H. Thackray (Fellow) Yerbury Foundation Lectures, 1959.   |
| 3. "A New Analysis of Building Costs"   | "Municipal Journal." August, 1959 |  |
- (The date against each paper is the date on which it appeared in The Chartered Surveyor, unless another source is specified. The majority of papers have also been reprinted separately, price 1s., though only a few of the more recent are still available.)

## BODIES WITH WHOM LIAISON HAS BEEN ESTABLISHED BY THE COST RESEARCH PANEL

## UNITED KINGDOM

## 1. Government Departments

Ministry of Works  
Ministry of Education  
Ministry of Housing and Local Government  
Ministry of Health  
War Department

## 2. Councils and Local Authorities

Cumbernauld Development Corporation  
Corporation of Dublin  
Hertfordshire County Council  
London County Council  
Local Authorities Associations  
Metropolitan Boroughs Standing Joint Committee  
Urban District Councils Association

} including various individual members

## 3. Professional Institutions and Trade Associations

Architectural Association  
Association of Heating, Ventilating and Domestic Engineering Employers  
City and Borough Architects Society  
Federation of Associations of Specialists and Sub-Contractors  
Housing Centre Trust  
Institution of Municipal Engineers  
London Master Builders Association  
Metal Windows Association  
Modular Society  
National Federation of Building Trades Employers  
Royal Institute of British Architects  
Royal Institute of Public Administration

## 4. Commercial Enterprises

Doulton and Company Limited  
Holland, Hannen and Cubitts Limited  
Howard Farrow Limited  
Imperial Chemical Industries  
John Laing and Sons Limited.  
Langley London Limited  
London Brick Company Limited  
Matthew Hall and Company Limited  
Otis Elevators Limited  
Scaffolding (Great Britain) Limited  
Tersons Limited  
Wates Limited  
Williams and Williams Limited

## 5. Educational Establishments or Bodies

Brixton School of Building

College of Estate Management  
Edinburgh University Department of Architecture  
Institute of Advanced Architectural Studies, York  
Liverpool University  
Nottingham and District Technical College  
University College, London  
University Grants Commission

## 6. Research Associations

Agricultural Research Council  
British Ceramic Research Association  
British Coal Utilization Research Association  
British Non-Ferrous Metals Research Association  
Building Research Station  
Cement and Concrete Association  
Department of Scientific and Industrial Research  
D.S.I.R. Fire Research Station  
D.S.I.R. Road Research Laboratory  
Economist Intelligence Unit  
Heating and Ventilating Research Association  
National Institute of Economic and Social Research  
Research Council of British Whiting Federation.  
Standing Consultative Conference in Building Research and Development  
Timber Development Association Limited

Note.—There have also been contacts with many other bodies in the United Kingdom through the questionnaires sent out at various times.

## ABROAD

Belgium ...	Société Nationale des Logements
Canada ...	Central Mortgage and Housing Corporation
	National Research Council
Denmark ...	Byggeriets Beregningsinstitut
France ...	Ministère de la Reconstruction et du Logement
Israel ...	Building Research Station
U.N.O. ...	Economic Commission for Europe
U.S.A. ...	New York State Housing Commissioner and Chief of Architectural Research

## THE PRESS

Architect and Building News	Guardian
Architects Journal	Local Government Chronicle
Builder	Municipal Journal
Contract Journal	Surveyor and Municipal and Country Engineer
Economist	The Times
Financial Times	

## Winding up the Contract

By C. J. LEIGH-HUNT (Fellow), M.C.Q.S.

*The following paper was given at a summer school for architects, quantity surveyors, students and guests, and grateful acknowledgments are made to the author and to the Chapter of South African Quantity Surveyors for permission to reprint the paper. Mr. Leigh-Hunt held office as President of the Chapter for the Session 1958-1959.*

*The clause numbers included in the paper refer to the Conditions of Contract that form part of the South African Standard Form of Contract.*

This is not a particularly easy subject on which to be informative or even entertaining. Most of you will have passed through the vale of tears implicit in the title of this paper, and thus most of you will know as much or more of the subject than I do. Furthermore, in the short time allotted to me, it is not possible to delve deeply into the legal ramifications which may surround the closing stages of a contract.

I have therefore decided to channel my remarks more to the students, and to those among you who either wish to aspire to private practice or who have newly launched themselves as practitioners. I hope, too, that during the discussion period you will all conspire to disagree with what I shall have said, so that a stimulating cross-section of opinion will result.

The more I considered this subject, the more strongly I felt that the actual winding up of a contract is merely the last chapter in the whole story of the erection of a building, and thus cannot intelligently be isolated from all the events, either stirring or otherwise, which occur from the time building operations begin.

Let us then briefly scan the march of these events and see what we can learn from them. Perhaps we might look at them from the viewpoint of the architect and the quantity surveyor in turn.

It is inescapable that the first word which springs to mind in letters of fire is "pre-planning." Its presence or absence to a greater or lesser extent in the contract documents plainly will have a profound effect on the ultimate result of the contract and the behaviour of all involved in its execution. In the last analysis, one finds that if pre-planning is complete, the contract requires no winding up at all. An impracticable ideal? Not at all. It happens on most major contracts in the United States of America. Please do not imagine that I necessarily endorse everything that happens in the land of the hot dog and the hot rod, but in this matter we could learn a lot. There the contract documents are complete to the last detail, and since large building operations in congested areas must be carried out on the assembly-line method, one departs from the programme at one's peril. The Americans very sensibly reason that a draughtsman's time spent in altering drawings beforehand is infinitely cheaper than that of an entire labour force in effecting changes on the job. I am reliably informed that if the owner asks the contractor how much it will cost to carry out a very minor variation, that sturdy soul is quite likely to reply pithily "five thousand bucks." And he means it. That is what it will set him back if he departs from his programme which was worked out to a hair before he began work.

Broadly speaking, our system of tendering upon bills of quantities, which in their priced form become one of the contract documents, is the best that human ingenuity can at present devise. But, let's face it, there is one big disadvantage

in that variations are only too easy to effect. Every item in the bills has its rate by which normally the contractor is bound, and the temptation to vary the work as seems expedient is strong both to the owner and to the architect. At the same time we must remember that the more efficiently the contractor organises his work, the more will variations disrupt his schedule and raise his costs. Indeed, some time ago the Durban Master Builders Association were considering the possibility of levying a surcharge on all extras to a contract. How such a scheme could be worked in practice I do not know, but to some extent I sympathised with it in principle.

If we agree then that variations should be as few as possible, it seems our immediate task should be to educate the building public accordingly. For there is little doubt that the failure of the building owner properly to crystallise his requirements in advance is responsible for the majority of variations. Others, of course, may be caused by the architect's failure properly to resolve his problems when preparing working and detailed drawings.

Perhaps it would be a good idea if at this point we broadly classify different types of variations, since they affect so strongly the winding up of the contract. Briefly one might regard them as follows:

- (a) previously unknown exigencies of the site;
- (b) changes of mind on the part of the architect;
- (c) changes of mind on the part of the owner; and
- (d) tenants' requirements.

The first type is generally due to bad patches of ground and other hazards which could not reasonably have been foreseen, and in most cases the work affected is covered by provisional items in the bills of quantities—in other words items which solve the given problem as far as is known, but which are subject to remeasurement on completion of the work. Contrary to opinion held in some quarters, provisional items are not, or should not be, light-hearted approximations, but serious-minded endeavours to make one's measurements match as closely as possible the work that will be done in actuality.

Items (b) and (c) referring to changes of mind on the part of architect and owner we have examined earlier, but the question of tenants' requirements perhaps deserves our scrutiny.

When designing multi-storeyed office blocks in large centres, the question of special provisions for tenants is impossible for the architect to forecast in most cases. He does not even know who these tenants will be. He may put in a "ghost" system of water supply and wastes and specify electrical ring mains capable of coping with exceptional loads, but that is as far as he can go. Furthermore, many building owners insist on the tenants bearing the cost of special provisions peculiar to themselves alone. The situation is



aggravated by the fact that under the Conditions of Contract the contractor cannot accept instructions from the tenants who must make their requirements known through the architect.

The upshot of it all frequently is that when the building is finished and the final account is complete, the luckless quantity surveyor has the elaborate task of producing a schedule of such additional costs for each tenant. Almost invariably these costs are higher than the tenants expect which induces in them reactions varying from black rage to nervous prostration, and some of them make for the hills without delay leaving the owner to bear the financial burden.

What is the solution? Well, it seems to me that the best way of dealing with this problem is for the contractor to give a lump sum quotation for each of these variations, with which the architect should acquaint the tenant before the particular work is put in hand. In any case it seems fair that the contractor should not be bound too firmly to the rates in the bills of quantities for this sort of work, since it is sometimes unusual and almost always fragmentary in character.

Since we are bound to admit that some variations anyway are inescapable, let us now turn to the method of recording them. This is done, of course, by the issue of variation orders on standard forms printed by the Institute of South African Architects. When they have authorised variations, many architects produce typewritten V.O.'s (as they are commonly called) promptly, but some, alas, do not. To those who do not, I would make a special plea that they mend their ways in this respect since it is important that the quantity surveyor can deal with V.O.'s immediately in the manner I shall deal with later. When an architect visits a job it is a fairly simple matter for him to take with him a block of V.O. forms with a few carbon sheets, and he can issue them in manuscript form on the site. When he returns to his office his secretary can send one copy to the quantity surveyor who thus receives it with the minimum delay.

Perhaps I should mention a system adopted by several firms of contractors—in Durban anyway. They carry out the procedure I have just described, but with standard forms of their own which bear the grandiose title of "Confirmation of Verbal Instructions," mercifully abbreviated, as a rule, to the initials "C.V.I." A carbon copy is sent to the quantity surveyor who establishes with the architect whether the instructions contained in it constitute a variation from the contract or not, and if so, the architect issues his official V.O. accordingly. This system helps the quantity surveyor a great deal, but strictly speaking it should not be necessary.

A further duty of the architect should be to ensure that P.C. items and Provisional Sums supplied to the quantity surveyor for inclusion in the bills of quantities are at any rate reasonably accurate if not exact. All too frequently they are considerably inflated as a kind of concealed contingency sum. In fact, a slightly embittered quantity surveyor once remarked in my hearing that so little did some provisional sums tally with what was eventually spent that he suspected many of them were culled from the number plates of passing cars! From the quantity surveyor's point of view alone, this can be serious because it is quite likely that some day an astute owner is going to ask a quantity surveyor to refund fees paid on the excess amount of such items.

It is essential also that the architect sends copies of all accepted quotations from nominated sub-contractors to the quantity surveyor for his guidance in preparing monthly statements and for inclusion in the final account.

There is another aspect of P.C. items and Provisional

Sums. These cause a great deal of work for the architect who is responsible for their expenditure under clause 24 of the Conditions of Contract. They can be a burden also to the quantity surveyor as I shall try to show later. There is, too, the occasional reluctance on the part of an owner to pay fees on lump sums on which he believes, in his innocence, no labour has been expended. For these reasons I feel it is self-evident that they should be eliminated as far as possible. And it can be done. No work exists which cannot be included as measured items in the bills of quantities.

An answer to this question was supplied a few years ago by the Council of the Institute of South African Architects when it was proposed that the architect should call for samples and prices of materials, and then should inform the contractor through the medium of the bills of quantities that he requires goods of stipulated quality and price which may be obtained from such-and-such a firm, but that the contractor is at liberty to obtain the goods elsewhere if he so chooses.

Some architects object to this system on the grounds that if they disapprove of, say, wood block floors being laid by a certain firm, and the contractor has used this firm's price in his tender, they are obliged to accept the position. This is true, but what of it? If the work is not carried out properly, the architect is empowered by clause 1 (d) of the Conditions of Contract to have the floors taken up and re-laid to his satisfaction. And most important of all, experience has shown that capable buyers, such as most reputable firms of contractors are, can obtain far cheaper prices from merchants and the like than an architect can by calling for sub-tenders.

Before we leave the predominantly architectural side of this subject, there is one matter I should like to touch upon.

This is an aspect of the retention fund. It is true that the owner signs the contract as the employer and, particularly if he has had previous experience of building, he should be aware of the provisions of clause 25 (e) in this respect. At the same time he may not, or he may forget, and it is highly advisable for the architect to inform him of his obligations in the matter and to make sure the joint account is in fact established. It may seem a small point, but if the owner subsequently has to pay the interest on the retention fund out of his own pocket, his affection for the architect is likely to be rather impaired.

It is now the turn of the quantity surveyor to bear our scrutiny in this pulsating drama. It is a very old chestnut that in the same way as the quantity surveyor is regarded by the lay mind as the "man who counts the bricks," he is considered by the members of the various Master Builders Associations to be the arch-criminal behind the delay in settling final accounts. This is very far from always being true, and I shall try now to make some suggestions for its being true even less frequently.

In the first place, I think it should be established that the quantity surveyor is remarkable among professional men in that he undergoes a change in function during the contract. He is appointed by the owner, and by him alone, even if it is on the recommendation and through the agency of the architect, and while he is preparing the bills of quantities he considers the owner's interests only. He is concerned with framing his bills in such a way that they shall be unambiguous and unequivocal so that no claim on the part of the contractor for an extra shall arise owing to his having been misled as to the nature of the work he originally priced. When the contract is in operation, however, we find the quantity surveyor has "suffered a sea-change into something

rich and strange." Now he has become completely impartial and watches the owner's and contractor's interests with equal assiduity. If it were not so, if he "fought for the hand that fed him," as is done legitimately enough by our legal colleagues, he would forfeit the confidence of the contractor at once, and in matters of building finance he would no longer be able to play his present quasi-judicial role which stifles so many difficulties that might otherwise arise in the contract.

As soon as his bills of quantities are complete, the quantity surveyor should supply the architect with a complete list of any deviations made from the drawings, specifications, schedules of finishings and so on. In this way all the contract documents may be brought into proper alignment thus obviating mistaken claims by the contractor for extras, and considerably simplifying the task of preparing the final account.

From the time building operations start the quantity surveyor's long-term project is the completion of the final account as speedily as possible and to the equity of both owner and contractor. In order to do this satisfactorily, he should not at any time lose financial grip of the job.

His work during the contract period may be divided into the following headings:

- (a) preparation of monthly statement of progress to assist the architect in preparing certificates for payments on account to the contractor;
- (b) estimating the cost of proposed variations in advance so that the owner may decide whether or not to carry them out;
- (c) measuring up for and preparing the final adjustment of variations and accounts—generally known as the final account.

It is important to realise that the preparation of monthly statements is not properly speaking the quantity surveyor's job. Perhaps he is in a better position to do this work than the architect, but he does it as an act of grace only, and the ultimate responsibility for the correctness or otherwise of the resulting certificate is solely the architect's in terms of the Conditions of Contract. For this reason I feel that the quantity surveyor's statement should not be entitled "Recommendation for Progress Payment" or whatever similar term is commonly used, but baldly headed "Progress Report" since it is not the quantity surveyor's province officially "to recommend" anything.

At the same time, if they are properly handled, these statements can be valuable contributions towards the ever-nearing final account. And now we begin to see why it is so necessary to have V.O.'s issued promptly. In order to retain control of the financial side of the job, major variations at least should be incorporated in the monthly statements.

There is a tendency among quantity surveyors—and a very understandable one to those in the profession—to regard the final account as a necessary evil, the preparation of which should be postponed as long as possible, or at least until there comes an easing in the amount of new work in the office. This is a dangerous practice. What if there is no such easing? Somehow and sometime the final account has to be prepared and it is an integral part of the quantity surveyor's work. It may sound idealistic to say that the measurement of V.O.'s should be done as they come in when one is very busy on new work, but our own experience has shown it can—and should—be done. It is surprising what can be fitted into one's office schedule when it becomes one's policy. The result of this policy is that one's progress

reports are exact and lo! when the building is finished the final account is also well on the way to being finished and an accurate penultimate payment can safely be made to the contractor.

My second heading, that is, estimating the cost of proposed variations in advance, assists of course in the laudable objects I have just defined, and acts as a further safeguard on the financial control of the contract.

To illustrate what can happen if the precepts I have rather piously given are not kept, I would like to tell you of an actual case-history. This part of my paper should be accompanied by a quantity of sombre notes from the brass section and much banging about on muffled drums. It concerns alterations and additions to a country hotel for which bills of quantities were prepared and for which the lowest tender was in the region of £20,000. The owner lived at the hotel, and he and the architect conspired together so industriously that it was clear to the harassed quantity surveyor when he paid his necessarily infrequent visits to the site, owing to its distance from town, that although the job was not increased in size hardly any items in the bills had escaped some variation. What impact all this was to have on the final cost of the work was impossible to say since the architect steadfastly refused to issue any V.O.'s at all. At length the job was complete, and very nice it looked too, and after repeated prodding the architect produced a list of known variations. The contractor produced one too, and the consequent scenes which developed were rich in drama. However, the dust settled eventually and the quantity surveyor started on the long, long trail of the final account which eventually in documentary voluminousness put the original bills of quantities to shame. But the ultimate horror was that the final cost of the work proved to be £32,000. To avoid harrowing you more than necessary, I will say briefly that not only was the owner unable to raise the additional money for nearly four years, but the hotel was a complete write-off as a business proposition—for ever.

This lamentable story points at least one important moral which should be taken to heart, particularly by newly-fledged architectural practitioners who handle chiefly domestic work. The proud owner-to-be of a new house in his enthusiasm will be full of bright ideas causing variations to the contract, but when these will involve additional expenditure, the architect should make it perfectly clear to his client. This may seem to be almost a truism, but there is frequently an understandable tendency on the architect's part to give the client what he wants without argument, since he seems to fear that any opposition from him on the grounds of expense will expose limitations to his own ability. Personal observation persuades me that this attitude is gravely mistaken. I feel that no matter what his manner may denote, the average individual wishes in a curious way to be dominated by his professional advisers. The medical profession is highly skilled in this sort of thing, and one sees the most granite-jawed people grow strangely submissive when confronted by a little discreet bullying from their doctor. Admittedly it is a delicate art, but of one thing one can be quite confident—if the final cost of his house is too high, the owner will hold his architect solely to blame.

We come now, with clearly audible creaks, to the final account itself. At best this is an arduous document to prepare, and we might break it down into the following arbitrary sub-divisions:

- (a) adjustment of variation orders;
- (b) adjustment of provisional work and sundry

claims by the contractor not covered by variation orders,

(c) adjustment of P.C. Items and Provisional Sums.

You are all familiar, of course, with the form of a final account with its two money columns for additions and omissions respectively. In essence, the quantity surveyor measures up the variations from the drawings on the site and prices them out at schedule rates, or, if none apply, at rates based on those in the priced bills of quantities—always bearing in mind the terms of clause 10 (b) of the Conditions of Contract. When the totals of the two columns are subtracted one from the other and the result is added to the original contract amount, one has the final cost of the building. Put in this way it sounds quite simple, but perhaps we should investigate it more closely.

At this point I should say that although it is dangerous to generalise I feel that in certain circumstances detailed measurements in a final account can be overdone. In any one item I cannot see the purpose of measuring up in detail for and omitting a large sum of money and similarly measuring up for and adding another large sum of money, when it is obvious from the beginning that the net difference is going to be disproportionately small. Indeed, it is possible to do one's client a disservice in this way, since in the process the quantity surveyor's fees may amount to more than the sum involved which in the case of omissions is very poor economy. After all, the quantity surveyor is trained in just this sort of thing, and if, in his mature judgment, such a variation is worth a certain amount of money and the contractor is satisfied with it, what more is required? A case of this type once occurred in our office. The job was rather unusual in that there were shops on the ground floor, offices on the first floor and flats on the second floor. Before the work had progressed as far as the flats, the owner decided he would like them to face in the opposite direction. Now in the conventional way we should have laboriously measured up and omitted the original second floor and equally thoroughly measured up and added the new one, thereby incurring a fee that would undoubtedly have made the owner's eyes emerge like organ stops. Actually what we did was to establish to the contractor's satisfaction after half an hour of calculation that the net extra cost per flat was as near as possible £100. This may not have been classical quantity surveying, and plainly such a method must be used with great discretion, but in this case it seems to me to have been sound commonsense.

On the other hand, contention is sometimes caused in the final account stage by the quantity surveyor stating that it will be necessary to re-measure part or the whole of a job. Both owner and architect reel back appalled at the prospect of the fee involved, and it is possible they will vehemently declare that so extreme a course is unnecessary and that the work can be merely adjusted not only equally well but a great deal more economically. Unfortunately it is difficult to define when it is essential to remeasure. Perhaps one might say it is when variations are of such a nature that they pull the "pin" out of the original measurements. A fair example may be seen in the case of foundations. If their depth only has been increased it is possible to adjust them, but if in addition the width of concrete and the wall thicknesses have been changed, remeasurement is the only answer.

It is fairly safe to say that the measuring and drafting of variations on the contract is the easiest part of a final account, although it is not necessarily so. I have vivid recollections of an alteration job I once had for which the architect developed the confusing habit of sketching proposed

variations on the job for the benefit of the contractor. I say "confusing" because he frequently executed these gems of design in chalk on walls which were destined to be demolished within a few days.

It is when the quantity surveyor embarks on adjusting P.C. Items and Provisional Sums that life becomes more complicated. One should be quite clear about the distinction between the two. A P.C. Item is the amount of money paid for an article (such as a mortice lock) exclusive of any trade or special discount, and it does not include any labour costs such as fixing charges. On the other hand, a Provisional Sum covers both material and labour as in the case of, say, a lift installation. Both sums include a 5 per cent. cash discount for the contractor in terms of clause 24 of the Conditions of Contract. Neither profession likes this discount which really has no basis in logic, but the National Federation of Building Trade Employers in South Africa does like it and all efforts to dislodge it from the contract form have been so far unsuccessful. It is a curious fact that whereas some nominated sub-contracting firms submit invoices inclusive of the 5 per cent. discount, the invoices of other firms are net. In fact it is not uncommon for invoices from the same firm for the same job but issued at different times to vary in this respect. Of course it is simple enough to add 1/19th to the net ones, but when one is surrounded by a maze of invoices it can be a source of irritation and possible error.

There is one aspect of nominated sub-contractors that never fails to astonish me. Throughout the contract period they watch their interests very carefully. In thundering prose they denounce in vain the withholding of moneys as retention, and in well-turned phrases spiked with threats and warnings they insist on being paid on due date. But when the final account is being prepared they become curiously bashful. One can instruct them to send in their final invoices by a certain date, or one can beseech them to do so, but they will not. I find this to be one of the most chronic causes of delay in settling final accounts.

Apart from this odd behaviour, adjusting Provisional Sums does not present very much difficulty if the quantity surveyor has copies of all accepted quotations as I mentioned earlier. But adjustments of P.C. Items are often a different story. Ironmongery in particular is troublesome in that the invoices submitted invariably contain items which belong to other jobs, and often one finds it more expedient to omit the original ironmongery completely and measure it up on the job with notebook in one hand, invoices in the other, and pencil between one's teeth like a pirate's dagger. Difficulties with P.C. Items are often aggravated by the contractor's lack of system in dealing with invoices.

If I may digress for a moment, a question that is often put to me is whether the quantity surveyor is responsible for seeing that every item in the original bill of quantities as amended by the final account has in fact been embodied in the building. The answer is no—that this is part of the architect's supervision. The quantity surveyor will do his best to assist in this respect but he cannot accept responsibility for it.

However, assuming the foregoing tribulations are behind him, the quantity surveyor arrives at the most delicate part of the final account, which is settling outstanding rates and claims with the contractor. When doing this the quantity surveyor must bear in mind what I said earlier concerning his essential impartiality. His job is to see that financial justice is done to all parties to the contract. Some quantity surveyors have the reputation of being hard on contractors, and I feel this is not in the best interests of the profession.



Perhaps the quantity surveyor does not actually bandage his eyes and brandish a pair of scales aloft, but his function is highly analogous. At the same time he must remember that he is representing the building owner who lacks the opportunity and technical knowledge to speak for himself, whereas the contractor can and does state his own case. In short, a duality of function obtains which demands a high degree of integrity and diplomacy on the part of the quantity surveyor.

Perhaps it is unfortunate that in many cases the contractor personally is no longer a party to the settlement of a final account. In large contracting firms this is of course impossible, and a staff—frequently of one-time quantity surveyors—is employed to do this. In some ways this is satisfactory in that both sides talk the same language, but occasionally I wonder whether some of these employees are not paid a commission on vagrant extras which they succeed in scaring out of the job. Even authorised variations give rise to such protracted discussion that the time thus spent must sometimes more than consume the sum of money at stake. But when the draft account is at last handed over to the contractors for final scrutiny, they seem to comb the job for hitherto unheard-of extras in much the same way as one flushes partridges in a field. Now I have repeated wearisomely that the quantity surveyor must be impartial, but he should not lean over backwards. If he suspects the contracting firm is trying to work points in this way to balance a contract which has proved financially unrewarding, a burst of righteous indignation is the only remedy coupled with a sharp reminder that such conduct is contrary to clause 1 of the Conditions of Contract. The fact is that a great deal of time is wasted by these dialectics, and the quantity surveyor who is making strenuous efforts to get the contract wound up begins to feel that he is fighting a kind of feather bolster and that the job will never be finished.

A further hurdle in the way of this ultimate goal which is very prevalent these days, is that the quantity surveyor is requested by the contractor to obtain agreement to the final account from his own sub-contractors as well. This should be completely unnecessary if the contractual arrangements between him and his own sub-contractors are tied up as they should be, and it can happen that the hazards I have described occur all over again on perhaps a smaller scale. In these circumstances I have often felt as if I were chasing a bead of mercury around a plate with a teaspoon. Just as one thinks one has it, the wretched thing breaks into a thousand fragments and one is worse off than before. The quantity surveyors among you will no doubt recognise this emotion.

Some contractors, again, have a habit of calling for a remeasurement of items in the original bill of quantities which they complain are short-measured. Quantity surveyors should resist this frivolous tendency by insisting upon reasonable evidence of a shortfall before complying. A typical instance of this sort of thing happens with flooring specialists. Their final invoices frequently reflect a few more yards of flooring than were given in the bills. Personally, I check our original dimensions and if they are correct—which I am relieved to say they invariably are—I will not allow any extra unless the difference in yardage can be accounted for satisfactorily by the specialist. There may be several reasons for such a disparity; marginal treatments may be fractionally narrower than they should be, or the rooms themselves slightly larger, and such factors do not constitute legitimate extras.

After all these obstacles have been successfully overcome, one might reasonably assume that the final account is complete. But sometimes how wrong can one be? The completed draft is extended, cast and checked, it is scrutinized and approved by the architect, and then it goes to the contractor for final approval. After that there is a deathly silence. Days, weeks, months, sometimes even years go by and nothing happens at all. Anguished appeals to the contractor are greeted with the reply perhaps that discussions with sub-contractors are still going on, and one finds oneself confronted with a new feather bolster to fight. Of course one reason for this exasperating behaviour is often that the contractor makes the shattering discovery that the final balance due to him is less than the aggregate amount he owes to his own sub-contractors. Then, again, the contractor is steadily earning interest on the retention fund, most of which is probably owed to nominated sub-contractors.

But whatever the cause, this delay is often highly embarrassing to the owner whose financial commitments remain unresolved, and one wishes some form of machinery could be introduced into the Conditions of Contract to prevent it. Perhaps this might be considered when further revisions to the Standard Form of Contract are made.

It is not usual for the quantity surveyor to typewrite the entire final account although some official bodies insist on it. For private work it is generally sufficient to type only the summary, and it is well that it be couched in a form which will be understood by the owner, since not unnaturally he has a very lively curiosity as to how his money has been spent. Furthermore, it is advisable that the summary should reflect only the final value of the work, and it should not attempt to state the final balance due to the contractor. That is the architect's province, and for all the quantity surveyor knows the owner may have made an unofficial advance of money privately to the contractor which would invalidate the quantity surveyor's statement of balance due. Strictly speaking the same remarks apply equally to monthly statements, but in these most architects seem to prefer the balance to be shown. Each copy of the summary should bear the contractor's signature to the fact that he accepts the total as the full and final value of the work under the contract, and it is advisable for the quantity surveyor to sign a brief postscript describing the basis on which the final account has been prepared and stating that to the best of his knowledge and belief it represents fairly and accurately the final value of the work.

By this time one hopes all defects in the building will have been rectified, and assuming the three months' maintenance period laid down in clause 25 of the Conditions of Contract has elapsed, the architect may issue the final certificate with a good heart and a clear conscience.

Unfortunately the story does not always have such a happy ending, and the contractor may refuse to make good defects as stubbornly as he fails to settle the final account. If the cost of such making good is less than the balance due to the contractor, I feel the architect forthwith should invoke clauses 21 and 22 of the Conditions of Contract and have the work done by another firm, paying the original contractor out less the cost thus incurred. The contractor may have erred grievously but I see no reason for protractedly depriving him of his just dues. However, the really important point is that the owner has his building finally completed much sooner, thus preventing him from holding his professional advisers, however unjustly, indirectly to blame.

## Cost Research Panel

### Indices of Building Costs by Trades

The period of price stability which lasted from late 1956, came to an end during 1960. The indices of building costs by trades show an all-round increase during the first three quarters of 1960, with provisional figures for the fourth quarter showing a further rise. The wage increase in April accounted for much of the rise, and this has been added to by increases in most materials especially clay products and timber. Steel is the only item heavily weighted in the indices which remained stable. In consequence, the two-storey housing series now stand fractionally higher than the multi-storey housing index for the first time since 1954.

TWO-STOREY HOUSING (1954 = 100)

Year	Quarter	Substructure	Concretor	Bricklayer	Pavior & Roofer	Carpenter & Joiner	Steel & Ironworker	Plasterer	Plumbing & Heating	Gas Fitter & Electrician	Lift Installation	Glazier & Painter	Total
1956	1	108	107	105	107	106	114	106	115	106	—	102	107.5
	2	110	109	107	108	108	115	109	114	107	—	107	109.0
	3	111	109	108	108	109	115	109	116	107	—	106	109.7
	4	111	109	107	110	109	116	108	115	107	—	107	109.6
1957	1	112	112	109	110	109	116	109	116	109	—	108	110.8
	2	112	113	109	111	110	117	109	117	109	—	108	111.0
	3	115	114	111	113	111	119	111	115	111	—	110	112.6
	4	114	114	111	113	110	121	111	116	115	—	111	111.9
1958	1	114	114	112	116	109	122	113	113	111	—	114	112.4
	2	114	114	113	116	108	122	114	113	107	—	114	112.4
	3	114	114	112	116	107	122	114	113	107	—	114	112.0
	4	114	114	112	116	106	123	113	114	108	—	114	111.7
1959	1	113	111	113	116	105	124	113	114	109	—	115	111.6
	2	113	111	113	117	106	124	113	114	108	—	115	111.5
	3	113	112	113	116	105	124	113	113	107	—	114	111.1
	4	111	110	111	114	104	123	111	113	106	—	113	110.2
1960	1	111	110	111	114	105	123	110	114	105	—	111	110.3
	2	113	110	112	115	108	123	112	116	106	—	113	112.1
	3	113	110	113	117	110	124	112	115	107	—	113	113.3

It should be remembered that the indices measure changes in the costs of materials and labour (adjusted for productivity) only. They do not show the effect on tender prices of changes in the economic climate of building development. During 1960, tender prices are reported to have increased with the greater volume of building work available, and the consequent lessening of competitive conditions. In addition, with fixed priced contracts, estimators have had to gamble on a substantial wage increase and shortening of working hours, the extent and date of which was not known until early December.

MULTI-STOREY HOUSING (1954 = 100)

Year	Quarter	Substructure	Concretor	Bricklayer	Pavior & Roofer	Carpenter & Joiner	Steel & Ironworker	Plasterer	Plumbing and Heating	Gas Fitter & Electrician	Lift Installation	Glazier & Painter	Total
1956	1	105	105	105	105	106	107	105	121	110	117	105	107.9
	2	107	108	107	109	108	111	107	118	110	118	108	109.6
	3	108	109	110	108	108	114	107	116	110	118	109	110.0
	4	108	109	108	109	108	114	107	115	110	120	108	109.9
1957	1	110	109	109	109	109	121	108	115	111	119	110	110.6
	2	110	111	110	111	110	122	109	115	113	120	111	111.2
	3	111	113	110	111	110	126	110	113	115	122	111	112.9
	4	113	115	110	111	110	127	110	110	113	122	113	114.2
1958	1	116	116	112	112	109	124	114	112	109	121	117	114.4
	2	117	116	112	113	108	124	114	111	103	120	117	114.2
	3	116	116	111	112	107	124	114	112	104	121	117	114.1
	4	116	115	112	111	105	124	114	113	104	122	116	113.9
1959	1	116	115	112	111	105	124	114	115	105	122	117	114.2
	2	116	115	112	111	105	124	114	114	105	122	118	113.4
	3	113	115	112	111	104	123	113	113	103	122	118	112.2
	4	113	113	111	110	104	123	111	113	101	122	116	111.1
1960	1	113	112	111	109	105	122	110	115	99	123	115	111.0
	2	114	113	112	110	107	122	112	116	100	124	117	112.1
	3	114	113	113	112	109	122	112	116	101	124	117	113.0

## Quantity Surveyors Committee: Extracts from the Minutes

*Minutes of a meeting held on 14th December, 1960.*

### National Joint Consultative Committee of Architects, Quantity Surveyors, and Builders: Constitution

The Committee noted that the Council had ratified on 5th December, 1960, the Constitution for the Joint Committee.

### Chartered Quantity Surveyors Annual Dinner, November, 1961

The Chartered Quantity Surveyors Annual Dinner is to be held on Tuesday, 21st November, 1961, and the informal conference of the Committee with the Officers of the quantity surveyors sections of the Branches will also be held on that date.

### Quantity Surveyors Committee: Procedure for Election under the Revised Constitution

The Committee received the detailed instructions and

timetable which have been sent to all the Branches.

### Triennial Conference of Quantity Surveyors, 30th May, 1961

The sixth Triennial Conference of Quantity Surveyors will be held at Caxton Hall, London, S.W.1, on Tuesday, 30th May, 1961, and the Quantity Surveyors (Education and General Purposes) Sub-Committee are making the necessary arrangements.

### Scale of Professional Charges for Quantity Surveying Services: Revision

A Report by the Quantity Surveyors Fees Sub-Committee on their proposals for the revision of Scale No. 36, was considered by the Committee.

No final conclusions were reached and a number of important points of principle were remitted for further consideration by the Sub-Committee.

## Quantity Surveyors Sections of the Branches

### Visits by Officers of the Quantity Surveyors Committee

During the current session, the Officers of the Quantity Surveyors Committee have continued to visit the Quantity Surveyors Sections of the Branches. The Officers have found that these contacts with members are very valuable indeed as a link in the chain of communications with the Quantity Surveyors Committee.

During the current session the following visits have already been made :—

- 1960  
24th Nov. *Devon and Cornwall*  
Vice-Chairman (Mr. J. G. Osborne) and the Chairman of the Quantity Surveyors (Education and General Purposes) Sub-Committee (Mr. E. Norman Harris, A.F.C.)
- 6th Dec. *Gloucester, Somerset and North Wilts.*  
Immediate Past Chairman (Mr. William James)
- 10th Nov. *Shropshire, Hereford and Mid-Wales*  
Chairman (Mr. Cyril Sweett) and the Under-Secretary (Mr. I. G. Neilson).
- 21st Oct. *Scotland*  
The Chairman and the Under-Secretary.

During the remainder of the session the following visits have been arranged. Where the name of the visiting Officer is shown with an asterisk, it is hoped that he will also be accompanied by the Under-Secretary.

- 1961  
16th May *Beds. and Herts.*  
The Chairman.\*
- 17th Feb. *Berks., Bucks. and Oxon.*  
Hon. Secretary (Mr. J. A. Burrell)
- 8th May *Eire*  
Chairman and Vice-President (Mr. G. D. Walford)\*
- 26th April *Hants., Dorset and South Wilts.*  
Chairman\*
- 9th May *Northern Ireland*  
Chairman and Vice-President\*
- 18th May *Leicester, Northants and Rutland*  
Vice-Chairman\*
- 22nd March *London (South Western)*  
Past Chairman
- 1st Feb. *Northumberland and Durham*  
Chairman\*
- 21st April *Notts., Lincs. and Derby*  
Chairman\*
- 23rd March *Scotland*  
Hon. Secretary
- 25th May *South Wales and Mon.*  
Vice-Chairman\*
- 13th April *Warwicks, Worcs. and South Staffs.*  
Immediate Past Chairman\*

## Announcements and Publications

### INSTITUTE OF ADVANCED ARCHITECTURAL STUDIES

#### Programme for 1961

A Programme of courses designed for architects and members of allied professions has been arranged by the Institute of Advanced Architectural Studies, Micklegate, York, for 1961. A note of courses of particular interest to surveyors will appear in the appropriate issue of *The Chartered Surveyor*. From 3rd-5th February, 1961, a course entitled "Analysis of Structural Forms" by simple models has been planned. Further details may be obtained from the Institute.

### BUILDING RESEARCH STATION DIGESTS

#### DIGEST No. 5 (Second Series).—*Materials for concrete*

Concrete is used for many purposes, other than providing the strength required from the structural point of view, and its satisfactory performance for any particular use depends upon the correct selection of the type of cement and aggregate as well as on good practice on the site. There is now available a wide range of cements and a considerable choice of aggregates both natural and artificial. This Digest summarises the main characteristics of these materials and of the different types of concrete made from them. Further Digests, not necessarily consecutive, will deal with other aspects of concreting practice.

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#### DIGEST No. 6 (Second Series).—*Drainage for housing*

The fact that four Digests on drainage (Nos. 55, 124, 125 and 134, first series) have been issued since 1953 reflects the changes in theory and practice that have been developing in this field as the result of research and the introduction of new materials. This Digest, reviewing some aspects of good and economical practice in the light of present knowledge, now supersedes the first of the four—Digest 55; it should be read in conjunction with Digests 124, 125 and 134 and British Standard Code of Practice 301 "Building Drainage." The Station's research on drainage is being continued; many details have yet to be investigated and the behaviour in practice of systems based on the new design principles will be watched.

### BUILDING PUBLICATIONS

#### Road Research Laboratory

Road Note No. 20: CONSTRUCTION OF HOUSING-ESTATE ROADS USING GRANULAR BASE AND SUB-BASE MATERIALS. (H.M.S.O., 1s.)

Road Note No. 29: A GUIDE TO THE STRUCTURAL DESIGN OF FLEXIBLE AND RIGID PAVEMENTS FOR NEW ROADS. (H.M.S.O., 2s.)

Road Research Technical Paper No. 33: FURTHER STUDIES IN THE COMPACTION OF SOIL AND THE PERFORMANCE OF COMPACTION PLANT. (H.M.S.O., 3s.)



## Building and Civil Engineering Prices

The Board of Trade have revised their series of wholesale price index numbers, the new series being based on 1954 = 100. The old series based on 1949 = 100 will be continued until December, 1961, and will continue to be printed in *The Chartered Surveyor* alongside the new series since this goes back no further than January, 1957. These indices were explained more fully in the February, 1959, issue of *The Chartered Surveyor*, page 457. The Indices were last published in *The Chartered Surveyor* for November, 1959, at page 243.

It has been our practice to publish also a table of construction costs of industrial buildings, the figures for this table being supplied to the Institution by the Board of Inland Revenue. This list was a purely informal one compiled by the Board for the use of Inspectors of Taxes. This index has now been merged with the Board of Trade Index on "Construction Costs," and the Board of Inland Revenue have now ceased issuing any figures for construction costs of industrial buildings. No further figures can therefore be published relating solely to industrial buildings but the Board of Trade Indices will be published from time to time.

### NEW SERIES

#### NEW CONSTRUCTION (1954 = 100)

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
1957	112	112	115	115
1958	115	115	115	114
1959	113	113	113	113
1960	113	114	114	114*

#### INDEX OF PRICES OF BUILDING MATERIALS (1954 = 100)

	Construction Materials				House Building Materials			
	1957	1958	1959	1960	1957	1958	1959	1960
January	112.3	114.9	113.3	114.2	111.3	112.9	110.7	112.4
February	112.4	114.6	113.3	114.2	111.5	112.5	110.6	112.5
March	112.3	114.6	113.3	114.3	111.5	112.4	110.7	112.7
April	112.5	114.2	113.2	114.6	111.3	112.1	110.6	113.2
May	112.3	114.1	113.5	114.7	111.3	112.0	111.0	113.3
June	112.4	114.1	113.3	115.0	111.5	112.0	111.0	113.9
July	113.4	114.0	113.2	115.2	112.6	111.8	110.9	114.2
August	115.3	114.0	113.3	115.4	113.2	111.6	111.0	114.6
September	115.5	113.8	113.3	115.5	113.5	111.3	111.0	114.8
October	115.4	113.9	113.4	115.6*	113.5	111.4	111.2	114.9*
November	115.3	114.1	113.7	115.8*	113.4	111.6	111.6	115.3*
December	115.0	114.0	113.9	116.1*	113.0	111.5	111.9	115.8*

\* Provisional Figure.

### OLD SERIES

#### INDEX NUMBERS OF THE COST OF NEW BUILDING AND CIVIL ENGINEERING WORK. Average 1949 = 100

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Annual Average
1949	101	100	99	100	100
1950	99	99	102	104	101
1951	108	118	121	122	117
1952	126	127	126	125	126
1953	125	124	123	122	123
1954	122	123	124	125	123
1955	126	130	132	133	130
1956	134	136	136	136	135
1957	139	139	141	141	140
1958	141	141	141	140	140.75
1959	139	139	139	139	139
1960	139	140	140	140*	

#### INDEX OF PRICES OF BUILDING MATERIALS 30th June, 1949 = 100

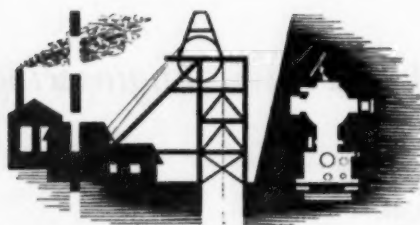
##### Building and Civil Engineering Materials Price Index

	1953	1954	1955	1956	1957	1958	1959	1960
January	131.2	130.0	134.2	141.1	146.6	146.9	144.8	146.0
February	131.0	129.7	135.0	141.2	146.5	146.5	144.8	146.0
March	131.0	130.3	135.2	141.9	146.6	146.5	144.8	146.1
April	130.7	130.7	136.0	141.4	146.7	146.0	144.7	146.5
May	130.2	131.0	136.0	141.7	145.9	145.9	145.0	146.6
June	130.2	131.3	136.3	141.8	145.6	145.9	144.8	147.0
July	130.5	131.4	136.7	142.6	146.3	145.8	144.7	147.3
August	130.4	131.3	138.6	143.2	147.8	145.8	144.8	147.5
September	130.1	132.0	139.5	143.2	148.0	145.5	144.8	147.6
October	130.0	132.8	139.4	143.1	147.9	145.6	145.0	147.8*
November	130.1	133.1	139.8	143.3	147.7	145.9	145.4	148.0*
December	130.0	133.5	140.5	144.5	147.0	145.8	145.6	148.4*
Yearly average	130.4	131.4	137.3	142.4	146.9	146.0	144.9	

##### House Building Materials Price Index

	1953	1954	1955	1956	1957	1958	1959	1960
January	129.0	128.6	133.7	140.9	146.5	146.0	143.1	145.3
February	129.0	128.5	134.2	141.1	146.3	145.5	143.0	145.5
March	129.2	129.2	134.4	141.7	146.5	145.4	143.1	145.7
April	129.0	129.8	135.5	141.3	146.5	145.0	143.0	146.4
May	128.8	130.3	135.6	141.3	145.6	144.9	143.5	146.5
June	128.5	130.4	136.5	141.4	145.5	144.9	143.5	147.9
July	128.5	131.0	137.2	142.8	145.9	146.6	143.4	147.7
August	128.6	131.1	138.7	143.0	147.0	144.3	143.5	148.2
September	128.4	131.7	139.4	143.0	146.9	143.9	143.5	148.4
October	128.2	132.2	139.4	143.2	146.9	140.0	143.8	148.6*
November	128.4	132.5	139.7	143.4	146.6	143.3	144.3	149.1*
December	128.4	133.1	140.3	144.6	146.1	144.2	144.7	149.7*
Yearly average	128.7	130.7	137.1	142.3	146.4	144.5	143.5	

\* Provisional Figure.



## LAND SURVEYING AND MINING SURVEYING

### Photogrammetry—The Other Side

By Dr. E. A. MISKIN, M.A., B.Sc. (Professional Associate),  
Reader in Photogrammetry at University College, London.

To the surveyor, photogrammetry, in all probability, means "mapping" or some kindred art or science closely related to surveys of the ground or its immediate environs. Yet there are various other applications of this science which are gradually but nevertheless steadily, being applied to many industrial, commercial and medical problems. The latter will be of little interest to the surveyor. In this appraisal of the field I shall attempt to outline some of the difficulties which are encountered, the type of work to which the techniques can be applied, and the accuracies which may be attained in industrial and commercial problems.

It is fairly well recorded in the histories of photogrammetry that architectural subjects were among the first to be analysed by photographic measurement. This was possibly due to the numerous detail features which could be easily identified prior to the universal application of stereoscopic measurement of the pair of pictures. The first and second world wars gave a great impetus to stereophotogrammetry applied to aerial photographs and it is only now, some fifteen years later, that any great interest has been shown in what I have termed "the other side".

In so far as the geometry of photogrammetry is concerned, this is similar for all applications, the change being only one of scale. The scale factor has, nevertheless, a great effect where the camera characteristics are concerned, for the object distances can rarely be considered as infinite, which is the case in aerial photography. This immediately brings into consideration the effects of changing focus for varying object distances and with it the stability of the inner orientation of the camera. Except in the case of projection onto a finite distance (multiplex equipment and the like) depth of field does not generally affect the surveyor. Now, however, depth of field can frequently be the critical factor particularly if convergent photography is required as, for example, in the case of photomicrography. As this is of such importance, the mathematics of the depth of field, using the hyperfocal distance as the criterion for calculation against any desired circle of confusion, is given below. In this argument the circle of confusion is allowed to vary directly with the image distance, and the hyperfocal distance  $b_H$  is taken as that distance at which the diameter of the circle of confusion ( $y$ ) can be considered satisfactorily small when the lens is focused to infinity. A figure which has been found to be satisfactory in practice is to take  $1/3000$  of the focal length of the lens for the diameter of the circle of confusion.

The theory of depth of field is given below. (Figure 1.)

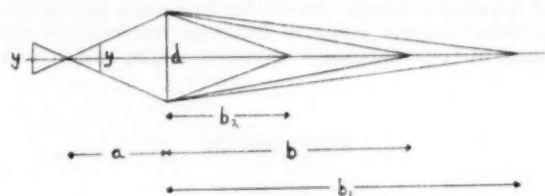


FIGURE 1

If we let  $\frac{a}{y} = \text{constant}$  so that  $\frac{da}{y} = b_H$ ,  $b_1$  be the furthest distance and  $b_2$  the nearest distance for sharp focus if  $b$  is the distance focused upon;

$$\begin{aligned} \text{then } b_1 - b_2 &= \frac{2b}{M \cdot \frac{b_H}{a} - \frac{1}{M} \cdot \frac{a}{b_H}} \text{—when } M \text{ is the ratio } \frac{a}{b} \\ &= \frac{2b}{\frac{b_H}{b} - \frac{b}{b_H}} \cdot \frac{2b^2 b_H}{b_H^2 - b^2} \end{aligned}$$

Thus the depth of field is given by  $\frac{2b^2 b_H}{b_H^2 - b^2}$

and the distances  $b_1$  and  $b_2$  become

$$\begin{aligned} b_1 &= \frac{(M+1)f}{M - \frac{y}{d}} = \frac{a}{\frac{a}{b} - \frac{y}{d}} = \frac{1}{\frac{1}{b} - \frac{1}{b_H}} \\ &= \frac{bb_H}{b_H - b} \end{aligned}$$

Similarly

$$b_2 = \frac{bb_H}{b_H + b}$$

$b_H$  is called the "hyperfocal distance" and is determined so that it is the near limit of sharp focus for an infinite focusing setting.

When a suitable aperture has been determined to give a satisfactorily sharp image of the whole of the object field

for a given datum plane the base distance should be calculated. This should be such that 90 per cent. to 100 per cent. overlap is obtained. Frequently the use of convergent axes is useful to give a greater parallax angle, but in this case consideration must be given to the type of plotting instrument which is to be used, and to the magnitudes of the parallaxes. These must, of course, lie within the range of the natural binocular vision of the observer or otherwise fusion will not be complete over the whole depth of the plastic model. It has been found, empirically, that in work of this nature changes in depth cannot be determined with any great accuracy if the parallax does not change by more than 0.02 mm. On the other hand, changes of parallax over the photograph which give rise to changes in parallactic angles exceeding 60° again cause viewing difficulties as the images will not remain in fusion. A similar difficulty arises where the object photographed is seen from the two perspective centres such that it appears as, say, of one side from one viewpoint and of another side from the other. This point is illustrated in Figure 2 as an extreme case.

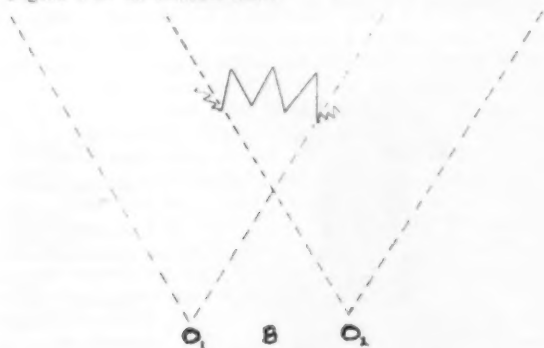


FIGURE 2

In general, and with the use of parallel camera axes, the base/distance ratio should normally lie between 1/2 and 1/20. Such ratios, when used in combination with well-constructed cameras and with precise plotting instruments, give rise to accuracies in practice which are given by the following formula:

$$\frac{0.2 N D}{a} = \Delta D \quad \dots \quad (1)$$

where  $N$  is the distance ( $D$ ) to base ( $B$ ) ratio,  $a$  — the image distance measured in the same units as  $D$  (i.e., the principal distance of the camera for the case under consideration) and  $\Delta D$  the precision with which changes of depth can be determined in mm. at object scale.

$$\text{e.g. if } a = 75 \text{ mm, } N = \frac{D}{B} = 20 \text{ and } D = 4 \text{ metres,}$$

$$\text{then } \Delta D = \frac{0.2 \times 20 \times 4000}{75} \text{ mm} \\ = 21.3 \text{ mm.}$$

The importance of the  $\frac{D}{B}$  ratio is immediately evident for, in

the case in which  $\frac{D}{B} = 4$ ,  $\Delta D = 4.3 \text{ mm.}$

Position errors are given by the equation

$$\Delta P = \frac{0.2 \cdot D}{a} \quad \dots \quad (2)$$

and for the case given above

$$\Delta P = 1.1 \text{ mm.}$$

By suitable variation of the factors given above it can be seen that any desired accuracy may be obtained; in extreme cases, however, the area within the object which is represented stereoscopically may become minute. If, for example, an accuracy of 0.05 mm. is required in depth, and the magnification of the object is to be, say, 1 : 1, then using a lens of 50 mm. focal length and angular field of 40° the image distance ( $a$ ) becomes 100 mm. and the object distance  $D = 100 \text{ mm.}$  For parallel camera axes and 55 per cent. overlap the base becomes only 45 mm., and the length of the object only 55 mm. The  $\frac{D}{B}$  ratio is then  $\frac{100}{45}$  and

$$\Delta D = \frac{0.2 \times 100 \times 100}{45 \times 100} = 0.44 \text{ mm.}$$

Such a problem has been found to arise in the determination of the roughness of a surface. An area of 1 inch square was taken and convergent camera axes were used to give sufficient physical separation to the two perspective centres which were brought onto a single plate. A similar arrangement is to be found in the stereocamera produced by Zeiss for ophthalmic purposes. (Figure 3.)

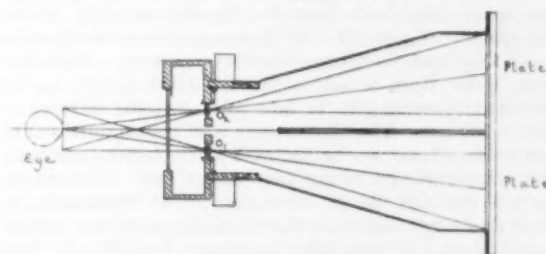


FIGURE 3

For more general work there is, however, no difficulty in obtaining a suitable base separation for the cameras. Standard short-base equipment is made by some of the continental manufacturers with base lengths of 120 cm. and 40 cm., having distance ranges approximately within the limits 6 and 25 metres and 2.5 and 10 metres respectively. An example of such a camera is shown in Figure 4.

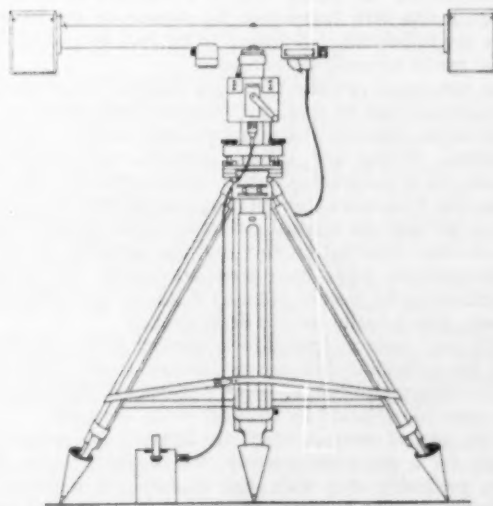


FIGURE 4



For a good deal of the work, in which I have been engaged, I have found that a variable base length (between the limits 25 cm. and 125 cm.) is an advantage, as is too the possibility of variable focusing. The latter has the advantage that any desired distance from 1 metre to 30 metres is obtainable at optimum definition, whilst the aperture may remain fairly well open. This latter is most advantageous when instantaneous exposure under difficult lighting conditions is required. The disadvantage, however, is in the construction of the focusing mechanism, which must be such that the lens does not rotate and so that the principal point position remains stationary for all principal distances.

Although the work with this type of camera is at present restricted to the use of plates, experiments are being carried out with film cameras of standard commercial design to determine their accuracy. The probable cause of the maximum errors with the latter is their deficiency in maintaining a perfectly formed plane for the film to lie in at the time of exposure. There is evidence, however, of the use of a pair of Zeiss Contax cameras for close range work in some underground mining records; apparently with excellent results.

Beyond the normal range of the short base equipment previously described there is also the standard photo-theodolite. (Figure 5.) This is manufactured widely and is nominally used for terrestrial photogrammetry. Nevertheless, it has depth of field of from 120 feet to infinity, the definition appearing to be best at a focusing distance of about 300 feet. The photography is of course restricted to stationary objects as the use of a single camera precludes the synchronisation of the stereoscopic pair. The camera axes in this case can be made parallel, or convergent, by suitable settings relative to the theodolite pointings, whereas in the short base equipment previously described the axes are constructed to be either parallel (as in Figure 3) or convergent in a fixed orientation.

As with all photogrammetric cameras their interior orientation must be determined to a high degree of precision. In this respect, with the exception of the photo-theodolite, the procedure varies from that used in the case of aerial cameras, for no longer can collimated light be used, nor can distances be considered infinite. The principal point position has to be determined and it is usually defined by fiducial marks, but in the case of a well-known 35 mm. camera it has been found that the corners of the format frame are sufficiently well-defined to be used instead of the special marks normally introduced.

For cameras of very short focusing distance an accurately calibrated grid can be used, and from the photographs of it the principal distance and principal point position can be computed. Radial and other distortions are frequently present and it is advantageous to calculate the elements of orientation from more than the minimum number of points, and to calculate the residual distortions which remain after the optimum principal distance and the optimum position of the principal point have been determined. For large magnifications the position of both nodes must be determined. A model slide is useful for this determination.

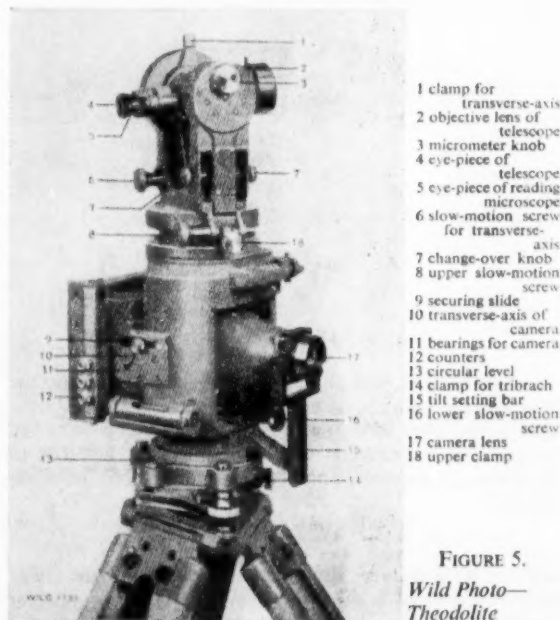
With short base equipment for somewhat greater distance work the calibration data can be obtained from a building or other similar structure on which well-defined object points have been co-ordinated by classical survey methods.

In the case of cameras, which are designed and produced entirely for a particular purpose, the careful selection of lenses, preferably of a wide-angle character, is important. The lenses should be matched so far as is possible for principal distance and for distortion characteristics and their

definition for finite focusing positions should be carefully analysed. During construction the parallelism of the optical axes should also be carefully adjusted and kept in this position by means of a stout base-bar joining the pair.

Except in the case where a very short exposure is necessary, or lighting is exceptionally bad in the case of mobile objects, the use of slow fine-grain plates is to be recommended. The sizes which I have used for work of this type are the standard 5 inch  $\times$  4 inch and the 3½ inch  $\times$  2½ inch, easily obtainable at any good photographic dealer, although if special plates, such as M.R. are required these must usually be ordered.

Although the camera constants and the known base-length are sufficient to obtain without further measurement the plotting scale, it has been found advantageous to insert into the object field at least three co-ordinated points. These are used for the critical determination of the scale and serve the useful purpose of a plane of reference. The type of marker used is varied to suit the object being photographed. Further control points may also be used but in normal cases a maximum of four need not be exceeded.



When the object to be portrayed is outside and sunlight is used for the illumination, it is beneficial to obtain good modelling without completely losing detail in both the highlights and shadows. The emulsion used should therefore have long gradation. When plotting it is again advantageous to use diapositives, as objects and forms seem to be more readily appreciated than when the original negatives are placed in the plotting instruments. Again, careful processing is necessary so that none of the original negative gradation is lost.

Insofar as producing a record of measurements is concerned, it has been found that in many cases co-ordinate values only are required. In such cases the stereo-comparator is the best instrument for use. For continuous line plotting a machine in which the functional model-producing factors are mechanical is to be recommended, for in the Porro-Koppe

type of instrument it is rarely possible easily to match the principal distance of the camera to the machine. When considering short principal distances (*e.g.*, in the case of photography with a 50 mm. focal length lens) the negative is enlarged by some convenient factor (say 4 x) so that the diapositive size becomes suitable for use in a machine, and so that the corresponding principal distance can be set. It must of course be emphasised that the negative and diapositive planes must be parallel during the enlargement operation and a good quality lens used for the projection. The lens employed should in fact be tested for distortion before it is used. Once the enlargement factor has been decided upon it is advantageous to produce, at the desired scale, a plot of the fiducial marks on white card and to use these for registration before making the diapositive.

In these applications of photogrammetry every type of work introduces its own particular problems; nevertheless, I hope that this brief summary of some of the equipment which may be used will serve as a guide for the straightforward type of work which can be carried out. As an example of this one can immediately point out the value to architecture, both for actual record purposes and for the checking of building progress and adhesion to specification. Of particular interest in this field is the application to restoration (*e.g.*, some of the Oxford colleges) and records of heavily ornamented ceilings, etc. It might well be used by the Ministry of Works to record, without necessarily plotting, some of the old and famous buildings which came under their care. Other similar organisations might also have need of such records. They would have indeed been most useful for the restoration of buildings damaged by fire or enemy action. (See Professor E. H. Thompson, "The Restoration of the Dome of Castle Howard," to be published in "The Photogrammetric Record".) Belgium, Sweden, France, Holland, Germany, and Switzerland have already recorded some of their prized architecture by similar methods.

Analysis of hydraulic models by these methods was commenced at University College London in 1950. Very satis-

factory results were obtained. (See M. El Motasem, "Some Application of Photogrammetry to Hydraulic Problems in Engineering," Ph.D. Thesis, University of London.) These included both a study of the water flow as well as a study of the erosion which takes place on the seabed. In the field of chemical engineering once more photogrammetric methods have been used for the analysis of pipe lay-outs, thus enabling pre-fabricated sections to be produced and easily assembled on the site. Other industrial applications are where three-dimensional measurements have been required, and where either very high temperatures, or stages of a purely transitory nature, are to be investigated. Frequently the photogrammetric approach seems to be the only one which has a reasonable chance of success, and this too is made difficult by the conditions of the photography; *e.g.*, in the effects of the welding process the metal itself becomes a light source and is difficult to photograph with sufficient detail for stereoscopic observation.

The above examples should serve to show that a great variety of subjects are suitable for photogrammetric analysis. Since the Photogrammetric Congress held in London in September, 1960, I have been approached by fourteen different industrial or research organisations in regard to the possibility of a photogrammetric technique which might satisfy their requirements. In many of these cases the photogrammetric method would seem to give the only practical solution; in others it would seem to be possible but not the most economic method.

It is these requests, and others such as, "Where can I find any details of this type of photogrammetry?" which persuaded me to produce this summary. I am fully aware of the shortcomings and the briefness of this article, but, should it stimulate any surveyor or photogrammetrist to discuss this science and to make its usefulness more widely known and appreciated, I shall be well rewarded.

#### ACKNOWLEDGEMENT

Acknowledgement is made to Messrs. Hall Harding Limited, for permission to use the illustration of the Wild Photo Theodolite (Figure 5).

## The Mapping of Britain

The Annual Report of the Ordnance Survey for 1959-60 (H.M.S.O., 8s. 0d. net) records another year of progress in the task of bringing the surveys of this country up-to-date and maintaining the new maps and plans in a reasonable state of revision.

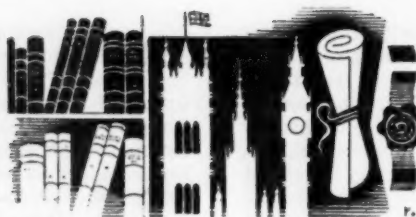
In his introduction to the Report the Director-General draws attention to the greatly increased demand for maps and plans at all scales, in particular the well-known One-Inch to One-Mile series, sales of which increased by 30 per cent. over the previous year's figures.

The main effort of the surveyors is still devoted to the resurvey of the major towns for the production of plans at the scale of 50 inches to the mile. Some 29,000 out of a total programme of 43,000 new plans have been published at this scale since 1945, and as the task nears completion, resources are being switched to the overhaul of the pre-war 25 inches to the mile plans which cover rural areas. This

programme involves production of about 180,000 plan units each measuring 1 square kilometre, and it is likely to take a further 20 years to complete the task.

In the section dealing with Field Surveys mention is made of the increasing use of air survey methods and of electronic measuring and computing devices. The extent to which developments of this nature are speeding up the work of the surveyors is illustrated by the description of a particular type of computation which would take about 500 man-days using desk calculators but which, using the DEUCE electronic computer, is now completed in four hours.

Amongst the new publications production of which is forecast in the near future are two Tourist Maps—"Wye Valley and the Lower Severn" and "Loch Lomond and the Trossachs"; a new sheet in the series of period maps—"Southern Britain in the Iron Age"; and six more sheets in the new Quarter Inch to One Mile (Fifth Series).



## PARLIAMENTARY AND GENERAL

### *Rating and Valuation Bill—Institution Memorandum*

*The following observations on the Rating and Valuation Bill have been submitted to the Minister of Housing and Local Government. A summary of the provisions of the Bill was published on page 389 of the January, 1961, issue.*

#### CLAUSE 3

The Institution does not consider that this clause is necessary.

If the information in the possession of the Ministry reveals a necessity for the clause, the Institution considers that, as at present drafted, it is open to the following criticisms:—

(i) It is extremely wide in scope, and could be applied to a great number of properties which do not give rise to any difficulty of valuation by normal methods; it is considered that the classes of properties to which the clause is to be applied should be stated in the Bill.

(ii) The clause is vague as to the Minister's powers in making an Order; it is not clear for example whether he can merely prescribe a method of valuation, or whether he can (in effect) prescribe the notional values of particular properties by directing that certain scales of value shall be applied: the latter course would appear to be in conflict with the normal definition of gross value or net annual value.

(iii) The "profits" basis has regard to the "ability to pay", but any alternative basis could apparently ignore this important principle.

(iv) The uncertainty which the clause will create will make it difficult for many ratepayers to forecast their probable rate liability.

(v) The making of an Order would appear to have the effect of removing the ratepayer's right to appeal against his assessment, which has always been a fundamental principle of rating, with the exception only of certain classes of public and quasi-public undertakings.

#### CLAUSE 5

On a previous occasion, the Institution recommended the making of a general statement on the principles of the rateability of plant and machinery, as opposed to compiling a detailed list.

The Institution regrets that this recommendation has not been accepted. If, however, an Order is to be retained, then it is felt that clause 5 (1) (b) should be deleted and that whenever in the 1925 Act and in the Plant and Machinery

Order the expression "in the nature of a building or structure" occurs, the word "structure" should be omitted.

It is thought that the inclusion of the word "structure" has had the result of bringing into rating a considerable amount of plant and machinery which the compilers of the original Order did not intend should be rateable, namely plant and machinery erected to assist in the process operations carried on within the hereditament but which is quickly removable.

#### CLAUSE 9

The Institution considers that it would be desirable for the Minister also to have power to initiate the repeal of exemptions which are provided by any local Act, since it could be in the interests of a rating authority not to take the initiative.

Provision should also be made for representations under this clause to be heard by the Minister.

#### CLAUSE 11

This clause provides for the abolition of rate books. The Institution hopes that sufficient information for the identification of hereditaments, as now appears in the rate books, will be included in future in the valuation lists.

#### CLAUSE 25 (3)

"Industrial hereditament" should now be specifically defined for the purpose of section 28 of the Finance Act, 1954, and not left to rest upon definitions in legislation which will lapse.

#### FOURTH SCHEDULE : PARAGRAPH 5

The Institution considers that the period for appeal from decisions of a local valuation court to the Lands Tribunal mentioned in paragraph 5 of the fourth schedule should not be less than 28 days.

#### NOTE

*The Rating and Valuation Bill received a second reading in the House of Commons on 30th November, 1960, and was committed to Standing Committee D. The membership of this committee includes Mr. J. E. H. Rees (Professional Associate).*



## Legal Notes

By H. F. BIDDER (Associate)

### TOWN AND COUNTRY PLANNING ACT, 1947

#### *Validity of condition imposed when granting planning permission*

When a local planning authority grant permission to develop land, section 14 (1) of the Town and Country Planning Act, 1947, gives them a very wide power of imposing conditions "as they think fit": but they must have regard to the provisions of the development plan "so far as material thereto," and to any other "material considerations"—material, presumably, to carrying out the purposes of the Act. If there is no operative development plan, they are to have regard to the provisions which in their opinion will be required to be included for securing the proper planning of the area (section 36).

There must obviously be a limit for the kinds of conditions that they may impose; and the line to be drawn is not described with any particularity. The case of *Fawcett Properties Ltd. v. Buckingham County Council* ([1960] 3 All E.R. 503), recently decided in the House of Lords, throws light on several aspects of the question.

Amersham Rural District Council, as agents for the county council (the local planning authority), had in 1952 given permission for the erection of a pair of cottages, subject to this condition:

"The occupation of the houses shall be limited to persons whose employment or latest employment is or was employment in agriculture . . . or in forestry, or in an industry mainly dependent on agriculture and including the dependants of such persons as aforesaid."

The whole of this condition, from the word "persons" to the end, reproduces exactly the definition of "agricultural population" in section 34 (2) of the Housing Act, 1930 (now section 114 (5) of the Housing Act, 1957), save that the words "or in forestry" are added.

The authority are required by the General Development Order, 1950, article 5, paragraph 2 (a), to state the reason for any condition imposed: and the reason given was:

"because the council would not be prepared to permit the erection of dwelling-houses on the site unconnected with the use of the adjoining land for agricultural or similar purposes."

At this time there was no operative development plan; but in 1950 an outline development plan for Buckinghamshire had been published, which recognised that parts of the county, including the site of these cottages, should form part of the "metropolitan green belt," and should be preserved against building development, so as to form a barrier against the further outward spread of London.

The cottages were built and occupied for some time by farm workers. At the end of 1956 the present appellants (a land company) bought the cottages knowing of the condition, which was registered as a local land charge. They asked the county council for the removal or modification of the condition. Getting no satisfaction, they issued the writ in this action in January, 1958. By their statement of claim they asked for a declaration that the condition was *ultra vires*; alternatively, that it was void for uncertainty, and of no effect. Before *Roxburgh, J.*, later before the Court of

Appeal and now before the House of Lords, it was contended that the condition was invalid on one or more of four grounds.

A. A condition restricting occupation of the cottages according to the personal circumstances of the occupants was *ultra vires*.

B. The condition was *ultra vires* because the whole, or a substantial part of it, could not fairly and reasonably be said to relate to the permitted development, or to any policy possible under the Act of 1947.

C. The condition was void for uncertainty.

D. The condition had already been fulfilled, and its force was spent.

*Roxburgh, J.* rejected A, accepted B, and granted the declaration. It was not necessary for him to consider C or D. The Court of Appeal rejected all four contentions, and allowed the appeal. The House of Lords did the same, Lord Morton of Henryton dissenting. He rejected contentions A, B and D, but considered that the condition was void for uncertainty.

Lord Cohen said that, as to contention A, the argument that a planning authority cannot specify what persons may live in a house, but only the purposes for which it could be used, conceded that a condition could be imposed that the cottages should only be used for agricultural workers; and he could see no significant difference between that and the present condition. As to contention D, that had not been seriously pressed.

He then considered contention B. He said that, while the wording of the condition was unfortunate, it could not be said that it was unrelated to planning purposes, the fulfilment of which was the duty of the county council. He cited a passage in the judgment of Lord Greene, *M.R.*, in *Associated Provincial Picture Houses Ltd. v. Wednesbury Corporation* ([1948] 1 K.B. 223, 233), which dealt with a condition imposed by a local authority in granting a cinema licence:

"The task of the court is not to decide what it thinks is reasonable, but to decide whether the condition imposed by the local authority is one which no reasonable authority, acting within the four corners of their jurisdiction, could have decided to impose."

The argument for the appellants was that the wording of the condition was so wide in regard to permitted occupants that it was not reasonably related to planning policy (*e.g.*, a retired farmer from Australia would be a permissible occupant). For the respondents it was admitted that anomalous positions might arise, but the condition made a broad distinction between persons whose employment was such that they had to live in a rural area, and those who need not. The condition excluded such persons as industrial or office workers who might have come into the area, and made a contribution to the retention of the rural character of this part of the county. The condition was right in principle, and should not be held to be *ultra vires* because of imperfection in detail. He (Lord Cohen) agreed with the view of *Romer, L.J.* in the Court below that, though absurd results could follow from the wording of the condition, it seemed, broadly speaking, that it was in line with the outline

development plan, and would almost certainly implement it. It could not be said that no reasonable planning authority, acting within the four corners of their authority, could have decided to impose it. It was not *ultra vires*.

As to contention C (void for uncertainty) it had cost him much difficulty, but he had come to the conclusion that this argument failed. He referred to the opinions to be delivered by *Lords Denning and Jenkins*. The principle involved was that, where a statutory provision entailing a penalty is ambiguous, the court should adopt any reasonable interpretation which would avoid the penalty; but the court should not strike out a provision on the ground of uncertainty unless it was impossible to resolve the ambiguity. In this case they were considering a condition imposed in a planning permission. The language of the condition was taken from the definition of "agricultural population" in section 34 (2) of the Housing Act, 1930: so, if that language were void for uncertainty here, it was no less void in the context of the Housing Acts. He was not satisfied that the condition contained any ambiguity that the court could not resolve. If at any future time any particular occupancy of these cottages should be challenged as infringing the condition, the court would be able to decide the question.

He would dismiss the appeal.

*Lord Denning*, first dealing with contention C (void for uncertainty), said that when the county council framed the condition, limiting the cottages to members of the agricultural population, they took the definition of "agricultural population" straight out of the Housing Acts. It was a bold suggestion that these words were void for uncertainty. The court is bound to find some meaning for a provision in a statute; unless the words are absolutely senseless, the court cannot hold the provision to be void. The same rule applied to this condition.

Turning to contention B (*ultra vires* because not related

to the permitted development), *Lord Denning* said: "The local planning authority is empowered to grant permission to develop land 'subject to such conditions as they think fit'. But this does not mean that they have an uncontrolled discretion to impose whatever conditions they like. In exercising their discretion, they must . . . have regard to all relevant considerations, and disregard all improper considerations; and they must produce a result that does not offend against commonsense. The conditions, to be valid, must fairly and reasonably relate to the permitted development. . . . A public authority which is entrusted with a discretion must act reasonably. Out of these various shades of meaning [extracted from decided cases] I am not sure that the last is not the best: for it puts planning conditions on much the same footing as byelaws made by a local authority, to which they are so closely akin. . . . The courts can declare them void for unreasonableness, but they must remember that they are made by a public representative body in the public interest. When planning conditions are made, as here, so as to maintain the green belt against those who would invade it, they ought to be supported if possible. And credit ought to be given to those who have to administer them, that they will be reasonably administered. . . ."

"I think the true answer to this attack on the condition is that counsel is giving it too wide an interpretation altogether. . . . The words of the condition are to be read in the light of the reasons which the planning authority are enjoined to give. . . . The word 'agriculture' does not include world-wide agriculture, but means agriculture in the locality. And 'industry' does not mean far-off industry in London or the big towns: it means local industry. . . . So construed, the condition fairly and reasonably relates to the permitted development."

*Lord Jenkins* and *Lord Keith of Avonholme* delivered concurring opinions.

## Parliamentary Notices

### BILLS BEFORE PARLIAMENT

(Correct to 21st December, 1960, when Parliament adjourned until 24th January, 1961.)

*Covent Garden Market Bill*. Second Reading, House of Commons, 7th December, 1960.

*Eso Petroleum Company Bill*. Private Bill. Passed, House of Commons. Second Reading, House of Lords, 24th November, 1960.

*Flood Prevention (Scotland) Bill*. Committed to the Scottish Standing Committee, 23rd November, 1960.

*Land Drainage Bill*. Second Reading, House of Commons, 14th November, 1960.

*Licensing Bill*. Second Reading, House of Commons, 29th November, 1960.

*Mock Auctions Bill*. Private Members Bill. First Reading, House of Commons, 23rd November, 1960.

*Public Health Bill*. House of Lords Bill. Second Reading, House of Lords, 24th November, 1960.

*Rating and Valuation Bill*. Second Reading, House of Commons, 30th November, 1960.

*Trustee Investments Bill*. House of Lords Bill. Passed House of Lords, 20th December, 1960.

*Trusts (Scotland) Bill*. Second Reading, House of Commons, 28th November, 1960.

*Weights and Measures Bill*. Second Reading, House of Lords, 22nd November, 1960.

### EXPIRING LAWS CONTINUANCE ACT, 1960

This Act, which received the Royal Assent on 20th December, 1960, continues in force a number of Acts which would otherwise expire. The Acts include the *Tenancy of Shops (Scotland) Act*, 1949 (which empowers the sheriff in certain circumstances to grant renewals of expiring tenancies of shops); the *Accommodation Agencies Act*, 1953 (which makes the charging of a fee for supplying information about houses and flats to let an offence); the *Rent of Furnished Houses Control (Scotland) Act*, 1943, and the *Furnished Houses (Rent Control) Act*, 1946 (which authorised the setting up of rent tribunals in Scotland and England and Wales respectively to fix reasonable rents for houses or rooms let furnished or with services).

## Law Cases

*The following is intended only as a clue to the Reported Cases*

QUEEN'S BENCH DIVISION  
(McNair, J.)

KING v. CAVE-BROWNE-CAVE  
[19th, 20th and 26th May, 1960]

*Landlord and Tenant—Lease—Covenant to pay "rates imposed upon the demised premises"—Water rate—Water facilities used by tenant not in demised premises—Whether tenant liable for water rate.*

By an underlease and deed of variation premises comprising office accommodation on the whole of the second floor of a building were demised to the tenant who covenanted "to pay all existing and future rates taxes assessments and outgoings whether parliamentary local or otherwise now or hereafter imposed upon the demised premises." The tenant had the right, in common with the tenants of the third floor premises, to use the lavatory and wash-basin on the third floor, there being no water facilities on the second floor. Water was supplied to the building through a single supply pipe provided by the Metropolitan Water Board, and was brought to the lavatory and wash-basin through internal pipes provided by the owner of the building. The landlord sought to recover from the tenant the amount of the water rate appropriate to the second floor of the building according to the annual value of those premises as stated in the board's notice of water rate given to the landlord.

*Held*: the landlord was entitled to recover from the tenant the amount of the water rate appropriate to the second floor of the building because, although liability to pay the water rate was a personal obligation and the rate was not charged on the premises, yet, on the true construction of the covenant, "rates . . . imposed upon the demised premises" meant "rates . . . in respect of the demised premises" and the water rate was such a rate.

*Drieselman v. Winstanley* ((1909), 53 Sol. Jo. 631) and *Bourne & Tant v. Salmon & Gluckstein, Ltd.* ([1907] 1 Ch. 616) followed.

*Badcock v. Hunt* ((1888), 22 Q.B.D. 145) not followed. ([1963] 2 All E.R. 751.)

COURT OF APPEAL  
(Ormerod, Willmer and Upjohn, L.JJ.)  
BEST v. GLENNVILLE  
[10th October, 1960]

*Landlord and Tenant—Agreement for lease—Illegality—Use of premises—Town and country planning—User requiring planning permission—Permission refused—Landlord's right to recover rent—Town and Country Planning Act, 1947 (10 and 11 Geo. 6, c. 51), s. 12 (1).*

The landlord let to the tenant a room for the purposes of a bridge club. The user of the premises for that purpose was to the knowledge of both parties a development within the meaning of the Town and Country Planning Act, 1947, section 12 (1), for which planning permission was required. The tenant went into possession and the club was opened. It was contemplated by the parties that the tenant should apply for planning permission, and the county court judge found that the proper inference was that the landlord would not have let the premises if he had known that they would be used without planning permission. Application for planning permission was made by the tenant, but it was refused. In

an action for rent the tenant contended that the purpose for which the premises were let was unlawful, and therefore that the contract of letting was illegal and unenforceable.

*Held*: the tenancy agreement was not illegal, for the parties had contemplated that planning permission should be obtained, and the refusal of planning permission did not affect the legality of the agreement; rent was, therefore, recoverable.

Dictum of Lord Goddard, C.J., in *A.-G. v. Smith* ([1958] 2 All E.R. at p. 558) explained.

Appeal dismissed. ([1960] 3 All E.R. 478.)

COURT OF APPEAL  
(Ormerod, Willmer and Upjohn, L.JJ.)  
MORGAN AND ANOTHER v. JONES AND ANOTHER  
[6th October, 1960]

*Landlord and Tenant—New tenancy—Business premises—Opposition by landlord—Answer—Failure of landlord to state, in his answer to tenants' originating application, his objection to terms proposed by tenants—Whether court required to hear evidence as to reasonableness of terms—Landlord and Tenant Act, 1954 (2 and 3 Eliz. 2, c. 56), s. 29 (1), s. 33, s. 34, s. 69 (2)—County Court Rules, 1936 (as amended), Ord. 40, r. 8 (2), Form 336.*

A landlord having served on the tenants of business premises a notice to terminate the tenancy under section 25 of the Landlord and Tenant Act, 1954, the tenants applied to the county court, by originating application under the County Court Rules, 1936 (as amended), Order 40, rule 8 (1), for the grant of a new tenancy under the Act of 1954, the terms proposed by the tenants being set out in the application. By Order 40, rule 8 (2), the landlord was required to file his answer in Form 336 of the County Court Forms. In his answer, in accordance with paragraph (1) of Form 336, the landlord stated that he opposed the grant of a new tenancy and set out the ground of his opposition, but he did not go on to state, as required by one of the alternatives in paragraph (2) of the form, that, if a new tenancy was granted, he objected to its being granted on the terms proposed by the tenants. At the hearing of the application, counsel then appearing for the landlord submitted that, although the landlord had not specifically stated in his answer that he opposed the proposed terms, such opposition was implied and he was entitled to call evidence to show that the proposed terms were not reasonable. The county court judge held that a new tenancy should be granted. In regard to the terms of the tenancy, the judge ruled that the case must proceed on the pleadings as they stood, and that, therefore, evidence as to valuation could not be called; and he held that, as the only terms proposed on the pleadings were those contained in the tenants' application, the new tenancy should be granted on those terms. The landlord appealed from the order of the county court judge in regard to the terms of the tenancy.

*Held*: in making an order for the grant of a new tenancy under section 29 of the Act of 1954, it was the duty of the judge under section 33 and section 34 of the Act, in default of an agreement in writing between the parties, to determine whether the terms of the tenancy were reasonable in all the circumstances, and his judicial discretion on these matters



could only be exercised on evidence; therefore, the case would be remitted to the judge to determine whether the terms proposed by the tenants were reasonable, and, if on the evidence they were not reasonable, to grant a new tenancy on such terms as would accord with section 33 and section 34.

*Per Upjohn, L.J.*: it was wrong to regard the documents required in these applications as pleadings in the strict sense.

Appeal allowed. ([1960] 3 All E.R. 583.)

#### HOUSE OF LORDS

(Lord Cohen, Lord Morton of Henryton, Lord Keith of Avonholm, Lord Denning and Lord Jenkins)

#### FAWCETT PROPERTIES, LTD. v. BUCKINGHAM COUNTY COUNCIL

[12th, 13th, 14th, 18th, 19th July, and 26th October, 1960]  
*Town and Country Planning—Development—Permission for development—Condition—Permission to build cottages on condition that occupants employed in agriculture, etc.—Validity—Town and Country Planning Act, 1947 (10 and 11 Geo. 6, c. 51), s. 14 (1), s. 36.*

In pursuance of their powers under the Town and Country Planning Act, 1947, a local planning authority gave permission for the erection of a pair of farm workers' cottages, subject to the condition that "The occupation of the houses shall be limited to persons whose employment or latest employment is or was employment in agriculture as defined by section 119 (1) of the Town and Country Planning Act, 1947, or in forestry, or in an industry mainly dependent upon agriculture and including also the dependants of such persons as aforesaid." The reason given for imposing this condition was "because the council would not be prepared to permit the erection of dwelling-houses on the site unconnected with the use of the adjoining land for agricultural or similar purposes." At the date of the planning permission, no development plan in relation to the land was in operation, but its inclusion in a green belt area was envisaged. On the question whether the condition was void as being *ultra vires* the local planning authority or for uncertainty or as being spent:—

*Held*: the condition was valid for the following reasons—

(i) it was not *ultra vires* because, although the wording of the condition might be open to criticism, it was fairly and reasonably related to the permitted development and did not impose an unreasonable restriction on the use of the cottages.

*Associated Provincial Picture Houses, Ltd. v. Wednesbury Corpn.* ([1947] 2 All E.R. 680) applied.

Dictum of Lord Denning in *Pyx Granite Co., Ltd., v. Ministry of Housing and Local Government* ([1958] 1 All E.R. at p. 633) applied.

(ii) (Lord Morton of Henryton dissenting) the condition was not void for uncertainty since it was based on words used in the Housing Acts which had a definite and ascertainable meaning and it must be construed as applying to agriculture or industry mainly dependent on agriculture within the area of the local planning authority.

(iii) the condition was not spent but was a continuing one.

*Per Lord Cohen*: in construing a statute or a contract, a court should not hold a provision thereof to be void for uncertainty unless it cannot resolve the ambiguity.

Decision of the Court of Appeal ([1959] 2 All E.R. 321) affirmed. ([1960] 3 All E.R. 504.)

#### COURT OF APPEAL

(Hodson, Pearce and Upjohn, L.JJ.)

#### STEPHENS v. CUCKFIELD RURAL DISTRICT COUNCIL

[12th, 13th May, and 2nd June, 1960]

*Town and Country Planning—Amenity—Notice to abate injury to amenity by condition of garden, vacant site or other open land—Building and surrounding yard used for business of car breaking—Whether "open land" included land within the curtilage of a building—Town and Country Planning Act, 1947 (10 and 11 Geo. 6 c. 51), s. 33 (1).*

Whether land is "open land" within the meaning of the words "any garden, vacant site or other open land" in the Town and Country Planning Act, 1947, section 33 (1) is a question to be determined in the circumstances of each case, and the court whose duty it is to decide it must exercise its common sense on the matter.

A plot of land two hundred feet square was enclosed by a wire fence with concrete posts, and had timber and metal buildings on some of it. The part of this land on which there were no buildings was used for the purposes of a business of a car breakers' yard some part of which business was carried on within a building surrounded by the unbuilt on part of the land. This use of the land was lawfully carried on without need for obtaining development permission. The local planning authority served a notice under section 33 of the Town and Country Planning Act, 1947, requiring the removal of all cars, car bodies and machinery from the "open land within the curtilage" of the premises.

*Held*: the unbuilt on part of the land was not "open land" within the meaning of section 33 (1).

*Per Curiam*: while the marginal note to a section cannot control the language used in the section, it is at least permissible to approach a consideration of its general purpose and the mischief at which it is aimed with the note in mind.

*Semble*: the words of the section should not be construed by reference to regulations made under powers therein contained, especially when such regulations are directed solely to procedural matters.

Decision of Lord Parker, C.J. ([1959] 1 All E.R. 635) affirmed on different reasoning. ([1960] 2 All E.R. 716.)

#### QUEEN'S BENCH DIVISION (Diplock, J.)

#### PRICE v. ROMILLY [11th and 12th July, 1960]

*Agriculture—Agricultural holding—Notice to quit—Consent of tribunal—Failure to comply with notice to remedy breaches of terms of tenancy—Several works required to be done by tenant—Failure of tenant to carry out one of the specified works by date of notice to quit—Whether partial failure in compliance sufficient to render tribunal's consent unnecessary under Agricultural Holdings Act, 1948 (11 and 12 Geo. 6, c. 63), s. 24 (2) (d).*

By a notice in writing, dated 21st April, 1959, the landlord of an agricultural holding requested the tenant to remedy breaches of his tenancy agreement by 31st October, 1959, by carrying out certain works as specified in seven paragraphs of the notice. On 16th December, 1959, the landlord served on the tenant a notice to quit which purported to be pursuant to section 24 (2) (d) of the Agricultural Holdings Act, 1948. The matter having been referred to arbitration under the Act, the arbitrator, by his award, determined that the notice to quit was properly given because the tenant had

failed to comply with a part of the notice of 21st April, 1959, in that he had failed to remedy a breach of the terms of his tenancy not inconsistent with the fulfilment of his responsibility to farm in accordance with the rules of good husbandry by carrying out the work specified in paragraph 1 of the notice. The award did not deal with two of the minor works required by the notice, but, dealing with the other matters, the arbitrator found (a) that two of the breaches referred to had been remedied before the date of the notice to quit, (b) that one breach could not be remedied within the time stated, and (c) that, in regard to certain other requests, the tenant was not in breach of the terms of his tenancy. On a motion by the tenant to set aside the award for an error in law on the face of the award, namely, that a partial failure to

comply with a notice to remedy breaches of the terms of a tenancy was insufficient for the purposes of section 24 (2) (d) of the Act of 1948 :—

*Held*: failure by a tenant to comply with one of the requirements of a notice to remedy breaches of terms of a tenancy, if the unfulfilled requirement were not *de minimis* and were in respect of a term of the tenancy whose performance was not inconsistent with the fulfilment of the tenant's responsibilities to farm in accordance with the rules of good husbandry, constituted sufficient failure in compliance for the purposes of section 24 (2) (d) of the Agricultural Holdings Act, 1948; accordingly the notice to quit was properly given and the award should stand. ([1960] 3 All E.R., 429.)

## Library Notices

### REVIEWS

#### Innovations in Building Materials

By Marian Bowley, B.Sc.(ECON.) PH.D. Published and presented by Messrs. Gerald Duckworth and Company, Limited, 3, Henrietta Street, London, W.C.2. 1960. Price 70s.

Dr. Bowley needs no introduction; members will already be familiar with her work on housing. Her latest study probes deeper into the building industry, to examine the causes and consequences of innovations in building materials, particularly in bricks, concrete, glass and cement. A further study is promised on innovations in structures and design and the relation between the professions, the industry and innovations.

Dr. Bowley is primarily interested in seeking the principles of the economics of innovations. But her study is much more than an obtuse economic treatise. The introductory chapters on the economic history of the building industry with its relation to the growth of the economy, and the economic studies of particular materials' industries bring together much valuable background information on the progress of the building industry.

Do innovations in building materials lead to lower prices? One conclusion of this study is that evidence for this is very elusive. Materials innovations may, in certain conditions, prevent a rise in price, but normally innovations in building materials are those aiming to find new uses for old products.

F. M. L.

#### Housing Needs and Planning Policy

By J. B. Cullingworth. Published by Messrs. Routledge and Kegan Paul. 1960. Price 28s.

A careful analysis of housing requirements upon the basis of the family unit, in the first part of his book, enables the author to discuss from a somewhat different standpoint the difficulties which have beset the planner and the disappointments which have crowned his efforts in postwar subtopia. Analysis and criticism are the order of the day and the student of the contemporary scene must, it seems, be prepared to quench his thirst for authoritative doctrine by the contemplation of many problems insoluble, save by an experimental and pragmatic, rather than a theoretical approach.

The discussion of the four main methods of dealing with overspill—higher central densities, new suburbs, new towns and expanded towns—is well ordered and extensively referenced. No one method is accepted as sufficient in

itself; but in stating the case against high central densities, a little more might have been said of the practical and ameliorating effects of non-conforming uses. When dealing with economic aspects of the same problem in the concluding chapters, the author confines himself to schemes of subsidised local authority housing and he is unable, therefore, to take fully into account the effect of land values as opposed to land costs.

The difference between "need" as a sociological term having objective content and "demand" with its economic inference of ability to pay, is properly distinguished; possibly the difference of definition accounts partly for the fact that Dame Evelyn Sharp thinks half a million new dwellings will be required to accommodate overspill, whereas the author considers that the figures should be much higher.

Spontaneous population movements, nationally from north to south, and regionally towards the conurbations, are not easily resisted, whereas artificial or planned movements in contrary directions are extremely difficult to induce. Mr. Cullingworth offers no specific remedy, but suggests action through a development of regional planning, control of location of employment, creation of new population magnets and central government finance of overspill.

If this book does not produce any radical solution, it expresses clearly the nature of the existing problem and pinpoints some of the difficulties inherent in the application of administrative foresight to human affairs.

M. F. T.

#### Photogrammetry

By Dr. Bertil Hallert (Professor and Head of the Division of Photogrammetry, Royal Institute of Technology, Stockholm). Published and presented by McGraw-Hill Publishing Ltd., 95, Farringdon Street, London, E.C.4. 1960. Price 85s. 6d.

This book, published in English, is a most welcome addition to the textbooks available for the student and the practising photogrammetrist. A good bibliography is included. The treatment of the subject is typically continental and the contents follow to some extent the usual continental system of basic principles of photogrammetry, terrestrial photogrammetry, aerial photogrammetry and fields of application of photography. Nevertheless, the matter is very well presented, and has, presumably, been written in English by the Swedish author himself. This is, of course, an improvement upon any translation which might be made by someone other than the author. The content of

the first three chapters is what might be expected in any standard work. In the fourth chapter some interesting fields of application are outlined. The appendices are of great value in this work. They give in concise form some of the fundamental projective relationships used in photogrammetry and the theory of errors of some photogrammetric applications. The theory of errors has not been treated completely—this would mean a complete volume to itself, but nevertheless the adjustments given relate to photogrammetric problems, and as such form a most useful section. Perhaps the most valuable contribution which this work will make to photogrammetric procedures is the stress laid by the author upon determination of errors and their affect upon photogrammetric measurements.

The book, written by an experienced teacher, is easily read and the novice photogrammetrist, as well as the experienced person, will find in it information which is reliable, well-presented and reasonably complete. It is a book which may be well recommended for both reference and systematic study.

E. A. M.

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- Bean, P. R., and Lockwood, A. Rating and valuation practice. 5th edition. Stevens, 1960. 335.8.

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## Woodfall on Landlord and Tenant

Twenty-sixth edition by L. A. Blundell, LL.M., and V. G. Wellings, M.A. (Oxon.). Published and presented by Messrs. Sweet and Maxwell Limited, 11, New Fetter Lane, London, E.C.4. Price 12 gns.

The new edition of this standard work on the law of landlord and tenant has been attractively published in two volumes which are very much easier to handle than the previous edition with its bulky parent volume and two permanent supplements on business tenancies and the Rent Acts. The matter in these supplements is now merged in the relevant chapters of the new edition.

The first volume now contains the text and index and the second volume the statutes, statutory instruments, forms, etc.

## The Principles of agency

By H. G. Hanbury, Q.C., D.C.L. Second edition. Published and presented by Messrs. Stevens and Sons Limited, 11, New Fetter Lane, London, E.C.4. 1960. 35s.

## Practical problems in foundations

By H. R. Reynolds, A.M.I.C.E. Published and presented by Messrs. Crosby Lockwood and Son, Limited, 26, Old Brompton Road, London, S.W.7. 1960. 25s.

## Correspondence from Members

## NOISE ABATEMENT ACT, 1960

Madam,

With reference to Mr. Anstey's article on the above Act (*The Chartered Surveyor*, December, 1960, at page 391), it is, as he says, only a noise which is a nuisance which can be a statutory nuisance and the question is, what is a nuisance? Mr. Anstey then gives the definition of private nuisance, but it would seem from section 1 of the Act that this statute is

to be read as *pari materia* with the Public Health Act, 1936, under which "nuisance" has been held to mean a public nuisance (*Great Western Railway v. Bishop* [1892] 10 Q.B.D. 138; *Betts v. Penge U.D.C.* [1942] 2 K.B. 154). A definition of public nuisance is, any act without lawful justification or an omission to discharge a legal duty, which act or omission obstructs or causes inconvenience or damage to the public in the exercise of rights common to all subjects of the Crown, or all within the sphere of operation of the

nuisance; also anything which endangers the life, health, property, morals or comfort of the public (see Halsbury's *Laws of England*, 3rd ed. vol. 28, p. 128).

There was no necessity for legislation as to private nuisances since the person affected already has a direct right of action, but in the case of a public nuisance the Attorney General has to be persuaded to act on behalf of the public. This will no longer be necessary in the case of noise or vibration. Another difficulty of public nuisance is also solved in these cases: in *R. v. Lloyd* [1800] 4 Esp. 200, the noise of a tinman plying his trade was offensive to persons in only three houses and it was held that this could not be proceeded against as a public nuisance; see also *A.G. v. P. Y. A. Quarries Ltd.* [1957] 2 Q.B. 169, in which it was said that a nuisance is a public nuisance when its effects are so widespread that it would not be reasonable for an individual to have taken action at his own expense. So far as noise and vibration are concerned it would appear that the inconvenience or discomfort of three occupiers will now be sufficient.

I think it should be noted that where noise or vibration is caused in the course of trade or business, it will be a defence to proceedings under the Act (but not to an action of private nuisance) that the best practical means have been used for preventing or counteracting the nuisance; also that no notice may be served on a statutory undertaking so far as it is exercising its statutory powers and that the Act does not apply to aircraft.

Yours faithfully,

W. A. LEACH.

15, St. Brelades, Trinity Place, Eastbourne.

#### COMPENSATION TO LANDOWNERS FOR THE LAYING OF SEWERS AND WATER MAINS

Dear Madam,

Having been dealing with compensation claims for such works executed by local authorities and statutory undertakers on "both sides of the fence" for the last seven or eight years, I am convinced that an amendment to the Public Health Act, 1936, is long overdue to enable uniformity of treatment to be given to all claims other than surface damage arising out of such works.

As the law stands at present statutory undertakers, such as water boards, carry out their works under special Acts, under which they have to negotiate proper rights of easement along a specified width of land and have to pay a freely negotiated consideration for clearly specified rights and for depriving the landowner of certain of his rights.

If a local authority undertake exactly similar works they are only bound to pay in accordance with section 278 of the Public Health Act "full compensation to any person who has sustained damage. . . ."

This has given rise to the assertion by local authorities that they have no liability to pay for the actual presence of the pipes but only for surface damage. In recent years, as stated by Mr. R. C. Walmsley in his article in *The Chartered Surveyor* for June, 1959, claimants' valuers have been getting over this by claiming and being awarded by the Lands Tribunal for "depreciation of freehold value."

This is fully justified, but the awards by the Lands

Tribunal vary very considerably so that no degree of uniformity exists either between one local authority case and another or between local authority and statutory undertakers' cases.

In a certain area in the north-west covered with new water mains I have negotiated considerations for clearly defined easements at prices varying from 2s. to 4s. per lineal yard based on length and width of easement strip and value per acre of the land.

Taking an actual field affected by a water main for which a consideration of 4s. per lineal yard has been agreed, where the width was 33 feet it is possible to visualise a situation where the local authority might now wish to lay a sewer alongside it.

Specified rights are given to the water board and specified restrictions are placed on the landowner over a specified area of land under a proper deed of grant for the water main so that there is a proper basis on which to assess the consideration.

Not so in respect of the sewer. Apart from the right to lay the pipe no rights or restrictions are mentioned except in so far as the narrow strip actually occupied by the pipe is concerned. No width is ever mentioned so that in such a hypothetical case it would be normal for a comparison to be made with the water main next door. The width of land occupied by a sewer is often no more than 2 yards, so that compensation on a proportionate basis to the water main would amount to 8.727 pence per yard run. I cannot see such an offer being accepted.

There is great confusion and a large measure of injustice caused by the fact that statutory undertakers have to act under a set of clear rules whereas only nebulous ones exist under the Public Health Act for local authorities, and ones capable of various interpretations.

A lot of litigation and reference to the Lands Tribunal together with the ensuing additional cost to all concerned could be saved by a suitable amendment now to the Public Health Act to bring local authorities into line with statutory undertakers so that they have to acquire definite easements over a specified area of land with specified rights the consideration for which should be freely negotiated with all landowners whose land it is proposed to traverse.

Yours faithfully,

G. L. W. BINNS,

Messrs. Jackson-Stops and Staff, 20, Bridge St., Northampton.

#### CORRIGENDUM

In the letter from Mr. A. W. Berryman (Professional Associate) on "Methods of Measurement" published in the December issue of *The Chartered Surveyor* at page 336, the first sentence of the penultimate paragraph should read: "Bearing in mind that the die is already cast for many overseas Methods and for the proposed revision to Standard Method, and without detailed knowledge of the latter, it is difficult to foresee the practical value of pooling ideas as suggested. However, the concept is appealing and like Mr. Boedeker I would like to see it done. . . ."

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says \* **DAVE CLUER**  
at Peterborough

*'When my Dad was a youngster he was bailiff for the Estate on which this pit is now being worked. They used to dig the knotts (Fletton term for clay) by hand. My word, though, it's mechanised now all right, from the pit, to the works—all the way.'*

\* **David Cluer,**  
Pit Manager, 41 years  
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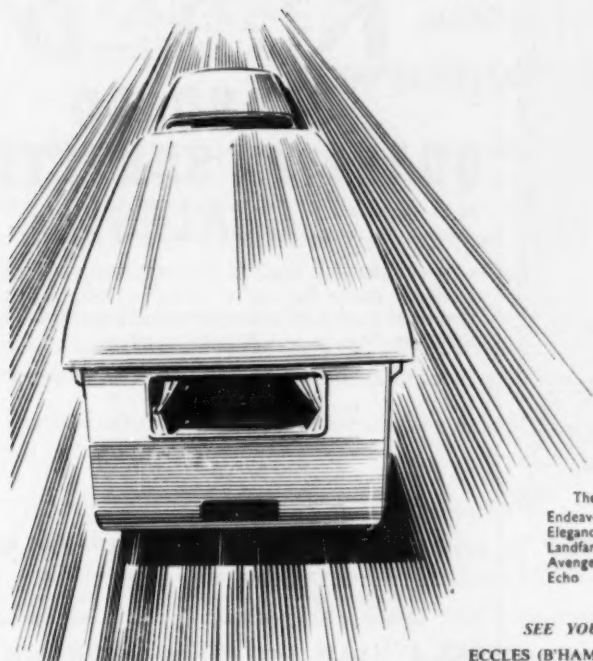
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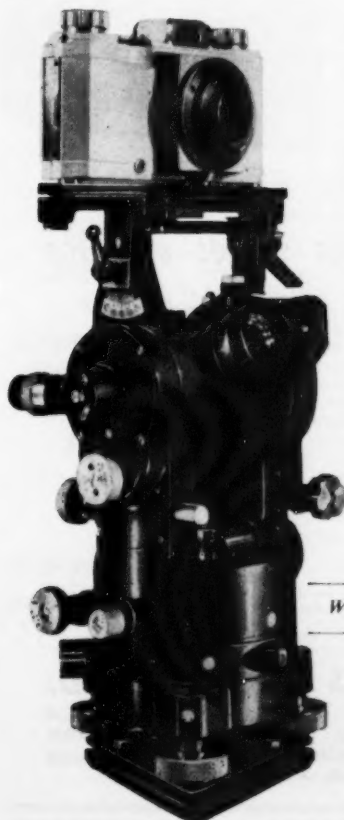
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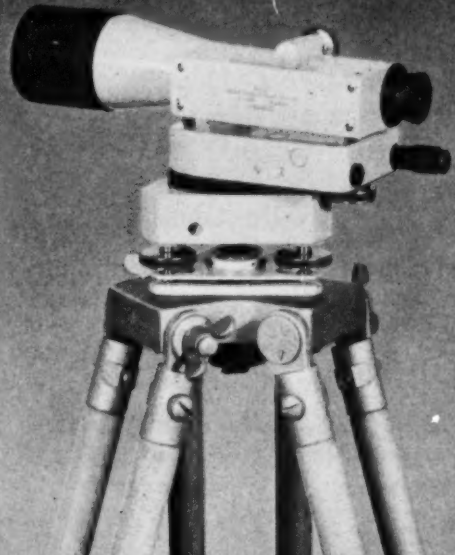
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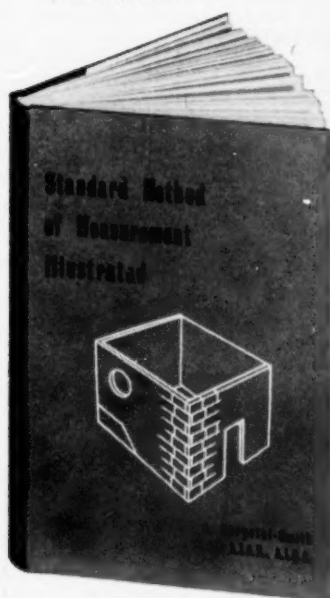
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THIS book is intended to serve as an illustrated guide and interpretation of some of the clauses of the official Standard Method of Measurement. It has been announced that a completely revised fifth edition will be published shortly, with authority for general use during 1961. It is the intention of the author and publishers to prepare a revision of this book based on the new Method as soon as possible after its publication. In the meantime, however, we feel that Quantity Surveyors and students will find this book useful, as all taking-off and measuring will remain based on the current Standard.

*Quantity Surveyors engaged in remeasurement, variation and final accounts for contracts in progress prior to the issue of the projected new Method will still have to continue using the present edition for perhaps five*

*years or more, as well as memorising the revised copy in readiness for new taking-off. It is probable that students taking professional examinations during the next two years or so will be examined on the present edition.*

Selected clauses (shown in italics) are quoted in extenso by kind permission of the Standing Joint Committee. Readers must in no way regard it as a substitute for the Standard Method but rather as a companion and guide to its better understanding. After most of the clauses quoted typical Bills of Quantities items and explanatory diagrams are inserted.

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Wellington firm of Chartered Quantity Surveyors offer a permanent and progressive position to a junior taker-off capable of preparing quantities for all trades without supervision. A knowledge of trade-by-trade system is an advantage and a thorough knowledge of reinforced concrete work and timber construction is essential. Salary by arrangement but not less than applicants' present United Kingdom equivalent. Passage to New Zealand paid and after two years satisfactory service return fare paid in cash. Further particulars may be obtained from Mr. Marriott, Messrs. Marriott and Haxton, 296, Lombard Quay, Wellington, to whom should be sent details of quantity surveying experience, qualifications and salary required.

## PENYBONT RURAL DISTRICT COUNCIL

Applications are invited from suitably qualified and experienced Surveying Assistants for a permanent appointment in the Engineer and Surveyor's Department of the Penybont Rural District Council at a salary in accordance with the APT Grade III of the National Scheme of Conditions of Service. The appointment will be subject to the provisions of the Superannuation Acts and to the passing of a medical examination.

The Council will consider providing housing accommodation for the successful applicant.

Forms of application, returnable by Friday, the 24th February, 1961, may be obtained from the undersigned.

ARTHUR L. JONES,  
Clerk to the Council.

Penybont Offices,  
Cottis Road,  
Bridgend, Glam.

NORTH EAST METROPOLITAN REGIONAL  
HOSPITAL BOARD

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W. G. Plant, Dip. Arch. (Liverpool), F.R.I.B.A.,  
Regional Architect  
HOSPITAL BUILDING PROGRAMME

## APPOINTMENT OF QUANTITY SURVEYORS

The Board are substantially increasing their staff to deal with rapidly increasing Hospital Building Programmes, and QUANTITY SURVEYORS are invited to apply for the under-mentioned posts, which offer exceptional opportunities of gaining experience in a wide, varied and interesting field. Posts are pensionable, with good prospects of promotion. Five day week.

## ASSISTANT QUANTITY SURVEYORS

Salary according to age and experience within scale £945-£1,360. Applicants should be Corporate Members of the Royal Institution of Chartered Surveyors (Quantity Surveying Section).

## SURVEYING ASSISTANTS

Salary according to age and experience within scale £645-£940. Applicants must have passed the intermediate examination of the Royal Institution of Chartered Surveyors.

Applications, giving age, details of education, professional training, qualifications, experience and past and present appointments, present salary and other relevant details, together with the names and addresses of two referees, should be sent to The Secretary, North-East Metropolitan Regional Hospital Board, 40, Eastbourne Terrace, London, W.2, within 14 days.

## OLDHAM FIRM of Chartered Surveyors require

Assistant (intermediate standard, Valuations or Building). Salary commensurate with capabilities. Apply to Box 436, T. G. Scott & Son Ltd., 1, Clement's Inn, London, W.C.2.

## PRISON COMMISSION, London, require

Assistant Maintenance Surveyor. Qualifications: Registered Architects, A.R.I.C.S. (Building Surveying Section) or equivalent with good professional experience in housing, institution and general work. Duties include maintenance and specifications for alteration and improvements of all types of buildings. Five-day week. Some travelling. Salary £805 (at age 25)-£1,260 plus London Weighting allowance of between £25 and £40. Starting pay according to age. Possibility of pensionable posts: promotion prospects. Particulars and forms from Ministry of Labour, Technical and Scientific Register (K), 26, King Street, London, S.W.1, quoting J.452 OA. Closing date, 15th February, 1961.

QUALIFIED ASSISTANT (preferably aged 25 to 35) required by old-established Firm with a mixed Practice. Knowledge of agricultural work an advantage, and experience of Valuations of all kinds, also of furniture sales. Good prospects for right man. Write, giving full details of age, experience, salary required, etc., to Box 442, T. G. Scott & Son Ltd., 1, Clement's Inn, London, W.C.2.

## QUANTITY SURVEYORS

Pensionable posts for men and women in:

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AIR MINISTRY  
MINISTRY OF EDUCATION  
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MINISTRY OF HOUSING AND LOCAL  
GOVERNMENT  
DEPARTMENT OF AGRICULTURE AND  
FISHERIES FOR SCOTLAND  
DEPARTMENT OF HEALTH FOR SCOTLAND  
MINISTRY OF WORKS

Age at least 25 and under 35 on 1.1.61 (extension for regular Forces service. Overseas Civil Service, established civil service and temporary Government service as Quantity Surveyor). Candidates must have achieved Corporate Membership of R.I.C.S. (Quantities Section) or have passed examinations necessary for attaining such membership. London salary £830-£1,125 according to age, rising to £1,300. Promotion prospects. Write Civil Service Commission, 17, North Audley Street, London, W.1, for application form quoting S.63.

## RENFREW COUNTY COUNCIL

The Council have a vacancy for a SENIOR VALUER in County Assessor's Department. £1,180-£1,365. Candidates must be qualified, i.e., having passed Final Examination of R.I.C.S. or equivalent, and have considerable practical experience in Valuation for rating purposes. Applications stating age, qualifications, experience and naming two referees to County Clerk, P.O. Box 12, Paisley, immediately.

## QUANTITY SURVEYOR

## GOVERNMENT OF SIERRA LEONE

## PUBLIC WORKS DEPARTMENT

To prepare bills of quantities and schedules of materials and be responsible for the administration of contracts and preparation of certificates.

Contract appointment for two tours. Salary in range £1,470-£2,145 with gratuity of 15 per cent. of aggregate pay. Children's allowance. Free passages. Rented quarters.

Candidates preferably under 45 years must be A.R.I.C.S. (Quantities).

Write Director of Recruitment, Colonial Office, London, S.W.1, giving full names, age, qualifications and experience, quoting BCD 112/15/021/E3.

SMITHS, GORE AND CO., Chartered Surveyors and Chartered Land Agents, have a vacancy in their Lichfield Office for an assistant aged about 25. One recently qualified and with some urban experience preferred. Please write stating age and experience to Corlton Estate Office, Craven Arms, Salop.

## J. W. SUMMERS AND PARTNERS

## CHARTERED QUANTITY SURVEYORS

have the following vacancies in their Newcastle Office:-

## (1) SENIOR SURVEYORS (TWO)

## (2) ASSISTANT SURVEYORS (TWO)

The successful candidate for (1) will be A.R.I.C.S., with at least 4-5 years post-qualification experience; preferably not less than 30 years of age and able to assume control of Major Projects. Commencing basic salary will be according to age and experience in the range of £1,200 to £1,700 per annum.

Applicants for (2) should have reached intermediate R.I.C.S. standard or equivalent and be able to measure and prepare final accounts. Commencing basic salary according to age and experience in the range of £700-£1,100 per annum.

All these positions are permanent, afford opportunities for overtime and offer every prospect of advancement. Five-day week and Staff Pension Scheme are in operation.

Applications should be made in writing in the first instance giving brief details of age, qualifications and experience to 33, Jesmond Road, Newcastle upon Tyne, 2.

SURVEYORS' ASSISTANTS required for a wide variety of work in Architect's office. Should be proficient in chain surveying and levelling, a good draughtsman and of Intermediate R.I.C.S. standard. Good salary offered in accordance with ability. Applications to: John H. D. Madin, 83/85, Hagley Road, Edgbaston, Birmingham, 16.

VALUATION ASSISTANT required by firm of Chartered Surveyors in the City of Birmingham. Age 25-35. R.I.C.S. qualification essential. Good salary. Car provided. Prospects of partnership to suitable applicant. Box 440, T. G. Scott & Son Ltd., 1, Clement's Inn, London, W.C.2.

VACANCY for Assistant up to standard of Intermediate Examinations (R.I.C.S. or C.L.A.S.) on Farm and Estate Managements and Farm Managements only. Written applications with details of experience to C.A.S.G., Strutt & Parker, Locks & Warner, Lewes (marked Confidential).

WELL-KNOWN FIRM of London Chartered Quantity Surveyors with varied and expanding practice require experienced assistants capable of handling jobs through all stages with the minimum of supervision. Commencing salary up to £1,500 p.a. according to ability. The appointments envisaged would be permanent. Write giving details of experience and salary expected to Box 444, T. G. Scott & Son, Ltd., 1, Clement's Inn, London, W.C.2.

LONDON (WEST END) firm require a junior Assistant Surveyor for work mainly in connection with structural surveys, repairs, dilapidations, etc. Salary according to experience. Write giving age and full particulars of experience and qualifications to Box 427, T. G. Scott & Son Ltd., 1, Clement's Inn, London, W.C.2.

LONDON COUNTY COUNCIL  
ARCHITECT'S DEPARTMENT

Vacancies exist in Quantities Division for both chartered and partly qualified quantity surveyors, the work providing interesting and rewarding careers in a variety of branches of the profession. The positions and types of work are as follows:-

1. *Bills of Quantities Section*-Grade III's Junior taking off working-up. Two years' experience on working-up plus some experience of junior taking off is essential.

2. *Estimating Section*-Grade III's and technical assistants. Approximate estimates and assisting in cost planning. Pricing bills of quantities for estimates comparable with tenders.

3. *Contracts Management Section*-Grade III's and technical assistants. Preparation and settlement of final accounts for major building contracts including interim valuations.

4. *Minor Works Section*-Grade III's and technical assistants for the measurement of minor works, schedule accounts, etc.

Grade III up to £1,250 and technical assistants up to £950 a year, according to experience and qualifications. Form and particulars from Hubert Bennett, F.R.I.B.A., Architect to the Council (EK/C/3332/2), County Hall, S.E.1.

## PARTNERSHIP REQUIRED

## QUANTITY SURVEYOR, F.R.I.C.S., F.I.Arb.

Age 34. Wishes to purchase partnership in established practice in the Southern half of England. Box 430, T. G. Scott & Son, Ltd., 1, Clement's Inn, London, W.C.2.

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Vol. 93 No. 8

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